



Pasture access in ruminants and equines



Definition and importance of pasture access

Pasture access refers to outdoor access with grazing or browsing opportunities. Grazing is defined as the intake of herbaceous forage *in situ* (Figure 1) whereas browsing corresponds to the intake of tender shoots, leaves and twigs from shrubs or trees (Figure 1). Cattle, sheep and horses mainly graze whereas goats and large camelids have more eclectic foraging behaviours (both grazing and browsing).



Figure 1: Cows grazing (left) and goats browsing on shrubs and trees (right).

Pasture access in ruminants and equines has many welfare advantages (e.g. possibility to perform natural feeding behaviours such as grazing) compared to indoor housing. Ruminants and equines are highly motivated to access pasture. Preventing pasture access in these species has a negative impact on their welfare including the development of abnormal behaviours and health issues. Pasture access is however associated with potential risks (e.g. parasitism, predation, heat stress) that need to be addressed.



Legal requirements

In the EU, legislation regarding pasture access applies only to organic production. According to EU Regulation 2018/848, animals in organic production should have access to an 'open air area', preferably pasture, when weather and ground conditions permit, unless restrictions due to health issues apply.



Method

When animals are kept on pasture, it is necessary to check that potential welfare risks have been addressed. This can be done by checking the environment, asking information from the farmer, and observing animals.

Environment-based indicators include:

- Water and forage availability
- Presence of shelters
- Quality of walking tracks

Information to ask the farmer include:

- Health management (e.g. biosecurity measures)
- Disease prevalence
- Predator-related issues
- Pasture access (e.g. frequency and duration)
- Feeding practices
- Water access

Animal-based indicators include:

- Body condition
- Injuries, lameness
- Behaviour (e.g. affiliative or agonistic interactions)
- Signs of disease

To know more, see the review '**Restricted access to pasture and inadequate grazing in ruminants and equines**'. For recommendations for inspection, please refer to the **Indicator factsheet 'Pasture access in ruminants and equines'**.

Benefits and risks of pasture access

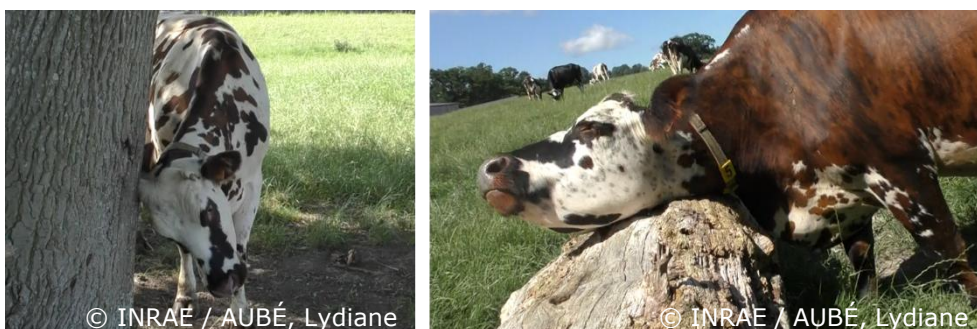
Pasture access has many positive impacts on welfare but presents several risks that need to be addressed. The benefits, risks and associated recommendations of pasture access are summarised in Table 1. More specific points concerning some species are listed afterwards.

Table 1: Benefits and risks associated with pasture access in ruminants and equines compared to indoor housing, and recommendations to ensure adequate pasture access. Benefits and risks listed in the table are general trends but may not apply to all species.

	Benefits	Risks	Recommendations
Feeding and watering	<ul style="list-style-type: none"> • Opportunity to perform natural feeding behaviour (grazing or browsing) • Opportunity to select food and make choices 	<ul style="list-style-type: none"> • Inadequate forage quality and quantity leading to nutritional or metabolic disorders (e.g. under- or over-feeding, grass tetany) • Poisoning from plants • Insufficient water access 	<ul style="list-style-type: none"> • Ensure adequate quantity and quality of forage at pasture or provide food supplementation • In case of high-quality pasture: limit grazing time and provide straw or hay indoors • Offer a diversity of plants (possibility to make choice with multi-species pasture) • Ensure continuous access to clean water, preferably close to the animal (< 150 m)
Health	<ul style="list-style-type: none"> • Less locomotory disorders • Less mastitis 	<ul style="list-style-type: none"> • Parasitism (e.g. nematodes, ticks, flies (Figure 2)) • Disease transmission from other herds or wildlife • Predation 	<ul style="list-style-type: none"> • Inspect animals daily • Adopt a health management plan (e.g. vaccines) • Apply biosecurity measures • Provide protection from predators (e.g. adapted fences)
Comfort	<ul style="list-style-type: none"> • Better lying comfort • Less risk of colliding with equipment • Less skin lesions 	<ul style="list-style-type: none"> • Adverse weather (e.g. heat, cold, rain) • Wet lying surface • Electric shock from fencing, injuries from non-adapted fences 	<ul style="list-style-type: none"> • Provide adequate shelters (e.g. trees for shade) • Keep animals indoors in case of adverse weather conditions • Choose fencing adapted to the species and the age of animals (e.g. avoid barbed wires for horses)
Behaviour	<ul style="list-style-type: none"> • Opportunity to walk and explore (more space available) • Less agonistic interactions with conspecifics • More positive interactions 	<ul style="list-style-type: none"> • Competition in case of limited access to resources (e.g. grass, water) 	<ul style="list-style-type: none"> • Ensure sufficient resource access to avoid competition especially for grass and water • Provide scratching support (e.g. trees) (Figure 3)



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Figure 2: Cows harassed by flies



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Figure 3: Cows scratching on tree trunk



Dairy ruminants

- Risks: walking tracks in poor condition (e.g. presence of stones, Figure 4), long distance between pasture and milking parlour can lead to fatigue and to increased risks of lameness in dairy cows (most likely for the other dairy ruminants too)
- Recommendations:
 - Avoid moving animals over long distances and do not rush animals (i.e. do not force them to walk beyond their normal walking speed)
 - Maintain tracks e.g. remove sharp stones, rocks, and excessively muddy or water-logged areas. Cover tracks with a layer of fine dressing material



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Figure 4: Poor-quality tracks for cows



Horses

- Benefits:
 - Improvement of human-animal relationship
 - A more positive emotional state than indoor housing
 - Less ocular discharge, dyspnoea, gastric ulcers and colic than indoor housing
- Risks of obesity in case of high-quality pastures (potentially leading to metabolic disorders, orthopaedic diseases, impaired thermoregulation, compromised reproductive efficiency)



Goats

- Recommendations: provide a pasture with possibility to browse and climb (see the Thematic factsheet 'Environmental enrichment for goats') (Figure 5)



Figure 5: Goats climbing or browsing



Buffaloes

- Recommendation: Offer the possibility to wallow to mitigate heat stress (Figure 6)



Figure 6: Buffaloes wallowing in water or mud



Camels

- Recommendation: shade access is recommended during hot weather (Figure 7)



Figure 7: Camels standing and lying under trees shade during hot weather

Legal requirements

The legal requirements referred to are based on EU legislation. National regulations in EU Member States may exceed these requirements.

Council directive 98/58/EC of 20 July 1998 concerning the protection of animals kept for farming purposes

'Animals not kept in buildings shall where necessary and possible be given protection from adverse weather conditions, predators and risks to their health'

(Annex, Animals not kept in buildings, Paragraph 12.)

Regulation (EU) 2018/848 of the European Parliament and of the Council of 30 May 2018 on organic production and labelling of organic products and repealing Council Regulation (EC) No 834/2007

'Livestock shall have permanent access to open air areas that allow the animals to exercise, preferably pasture, whenever weather and seasonal conditions and the state of the ground allow, except where restrictions and obligations related to the protection of human and animal health have been imposed on the basis of Union legislation.'

(ANNEX II, Part II, 1.7.3.)

'[...] Competent authorities may authorise the tethering of cattle in farms with a maximum of 50 animals (excluding young stock) where it is not possible to keep the cattle in groups appropriate to their behaviour requirements, provided they have access to pastures during the grazing period, and have access to open air areas at least twice a week when grazing is not possible.'

(ANNEX II, Part II, 1.7.5.)

'For bovine animals, ovine animals, caprine animals and equine animals (...)

(b) animals shall have access to pasturage for grazing whenever conditions allow;

(c) notwithstanding point (b), male bovine animals over one year old shall have access to pasturage or an open air area;

(e) rearing systems shall be based on maximum use of grazing pasturage, by reference to the availability of pastures in the different periods of the year;'

(ANNEX II, Part II, 1.9.1.1.)

'For cervine animals (...)

(b) animals shall have access to pasturage for grazing whenever conditions allow;

(d) rearing systems shall be based on maximum use of grazing pasturage, by reference to the availability of pastures in the different periods of the year;'

(f) natural grazing shall be ensured in a pen during the period of vegetation. Pens that cannot provide feed by grazing during the period of vegetation shall not be allowed;

(ANNEX II, Part II, 1.9.2.1.)



References

Brunet, V., Fusi, F., Bernardo, T., Canali, E., Ruet, A., Faye, B., & Aubé, L. (2025). Review - Restricted access to pasture and inadequate grazing in ruminants and equines. *EURCAW Ruminants & Equines*. <https://doi.org/10.5281/zenodo.15698776>

