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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 more details, please refer to the ***Thematic factsheet 'Pasture access in ruminants and equines'***.

Environment-based indicators

The environment at pasture should be assessed according to the following indicators:

Welfare criteria	Indicators	Reference values
Absence of prolonged hunger	- Forage access: check if there is sufficient grass (Figure 2), and if not, check whether additional forage or food is provided	- The grass on the pasture is sufficient (Figure 2), if not, additional forage or food is provided
Absence of prolonged thirst	- Distance to walk to access to water points	- <150 m proximity to animals, wherever the animal is in the pasture
Absence of disease	- Biosecurity measures (e.g. fences to avoid contacts with neighbour herds and wildlife)	- Fences around pasture allow a complete separation from other herds and prevent contact with wildlife
Ease of movement	- Hazardous objects or areas in the paddock - Pasture conditions	- Absence of hazards - Good underfoot conditions on pasture i.e. not water-logged (Figure 3)
Thermal comfort	- Shelters and shade	- Presence of artificial or natural shelter to protect all animals simultaneously (Figure 4, 5 and 6)
Appropriate behaviour	- Possibility to express appropriate behaviour	- Presence of scratching supports - Presence of structures allowing climbing (for goats and lambs)

Figure 2: Examples of adequate (top pictures) and inadequate (bottom pictures) pasture conditions to facilitate grazing. Animals need to be supplemented with additional forage or concentrate on inadequate pasture.

Figure 3: Examples of inadequate pasture conditions (water-logged pasture plots and ground with insufficient bearing capacities).

Figure 4: Examples of adequate shade access for camels, horses, sheep and goats that can cover all animals without forcing them to crowd together.

Figure 5: Examples of inadequate shade access for cattle, goats and horses that can lead to overcrowding under the shade area, competition for access to shade and increased likelihood of thermal discomfort for animals without access to shade.

Figure 6: Examples of artificial shelters for sheep, horse and llamas and artificial shade for cows.

Management-based indicators

The management of animals at pasture should be assessed by asking the farmer or farm manager about the following indicators:

Welfare criteria	Indicators	Reference values
Absence of prolonged thirst	- What is the duration of water access during the day?	- 24h/day
Absence of prolonged hunger	Feeding practices - Is supplementary feed provided in case of insufficient quality or quantity of pasture?	- Yes
Absence of disease	- What is the frequency of animal inspection?	- At least once a day (see TFS1 quality of care)
	- What is the health management plan?	- Preventive measures such as vaccine and anti-parasitism strategies (e.g. fly mask for horses, Figure 7)
	- What are the biosecurity measures (i.e. strategies used to avoid contact with wildlife and neighbouring cows)?	- Presence of double fences to restrict contact with neighbouring herds and wildlife
	- What are the measures taken to avoid predator-related problems?	- Presence of adapted fences, shelters or any other measures to protect the animals from predators (e.g. livestock guardian dogs)
	- What measure is taken in case of too high-quality pasture?	- Limited access to pasture or hay feeding
	- What is the prevalence of diseases due to ingestion of toxic plants?	- 0%
	- What is the prevalence of diseases due to endoparasites and ectoparasites?	- 0%
	- What predator-related issues are you facing (e.g. prevalence of mortality)?	- None
Thermal comfort	- Are there natural or artificial shelters on all pastures sufficient for all animals?	- Yes
	- What are the measures taken in case of extreme weather conditions?	- Keep animals indoors or provide them adequate shelters

[1] Thematic factsheet 'Quality of care'

Figure 7: Examples of fly masks for horses.

Specific indicators for dairy animals

Dairy animals kept at pasture are usually moved to the milking parlour twice a day. The milking process generally includes spending time away from pasture, gathering cows and walking along tracks to the milking parlour which can increase the risks of lameness. Indicators specific to dairy animals at pasture are:

	Questions to ask or indicators to be observed	Reference values
Information to ask the farmer	- Time away from pasture for milking	- < 90 min1 (in dairy cows)
	- Distance to walk between milking parlour and pasture	- The less the better (< 8 km/day in dairy cows)
Environment and animal-based indicators	- Quality of tracks	- Well maintained flat tracks covered with non-abrasive material, free of stones or sharp rocks
	- Handling during gathering of animals at pasture and between pasture and milking parlour	- No rushing of animals, calm handling - The animals walk calmly, no animal is running or pushing each other

[1] O'Connor et al. (2020)

References

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