

Grazing and animal welfare: what do we know?

Agnes van den Pol-van Dasselaar; EGF WG “Grazing”, 26 June 2022, Caen, France



Five freedoms

(Brambell Committee, 1965; British Farm Animal Welfare Council, 1993)

- Freedom from hunger and thirst
- Freedom from discomfort
- Freedom from pain, injury and disease
- Freedom to express normal behaviour
- Freedom from fear and distress



The 2020 Five Domains Model: Including Human–Animal Interactions in Assessments of Animal Welfare

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animal
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Review: The Five Domains model and promoting positive welfare in pigs

N.J. Kells 

Meeting physical and emotional needs of an animal



Effect of grazing on animal welfare



Methods

- Literature review
- Survey among members of EGF Working Group “Grazing”



Survey 2022



91 responses

Questions:

- What do you consider the most important positive effects of grazing on animal health?
- What do you consider the most important negative effects of grazing on animal health?
- Animal welfare includes aspects that are relatively easy to measure, such as health, and also intangible aspects such as emotions and feelings. What is in your opinion the overall effect of grazing on animal welfare?

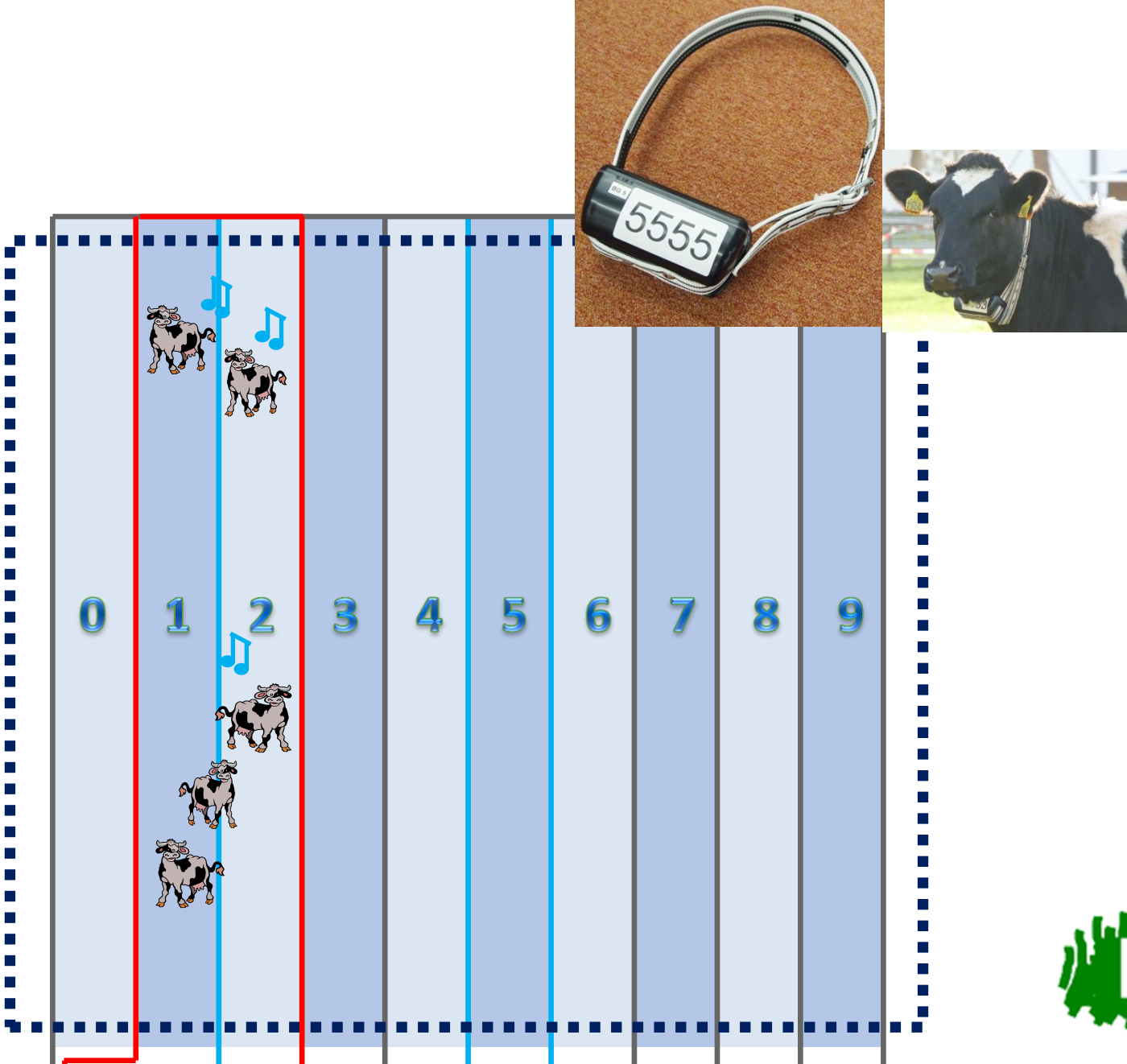


Review paper: Cows on pasture-based systems (Arnott *et al.*, 2016)

- Lower levels of lameness, hoof pathologies, hock lesions, mastitis, uterine disease and mortality
- Benefits for dairy cow behaviour, in terms of grazing, improved lying/resting times and lower levels of aggression
- When given the choice, cows showed an overall preference for pasture
- Potential areas for concern: physiological indicators of more severe negative energy balance, and in some situations, the potential for compromised welfare with exposure to unpredictable weather conditions



Virtual fencing



Effect of grazing – positive effects

Van den Pol-van Dasselaar, Corré, Hopster, van Laarhoven, Rougoor, 2002

	No grazing (indoors)	Grazing
Natural behaviour	+	++
Herd behaviour	+/-	+
Individual distance	-	+
Agression	+/-	+
Standing up and lying down	-	+
Udder health	+/-	+
Claw health	-	+



Effect of grazing – positive effects

Van den Pol-van Dasselaar, Corré, Hopster, van Laarhoven, Rougoor, 2002 and [survey 2022](#)

	No grazing (indoors)	Grazing
1. Natural behaviour	+	++
Herd behaviour	+/-	+
Individual distance	-	+
Agression	+/-	+
Standing up and lying down	-	+
3. Udder health	+/-	+
2. Claw health	-	+

Supply of vitamins and carotinoids through fresh pasture
Clean air, more positive social interactions, more agitation
Low rank cows can eat undisturbed / less competition



Effect of grazing – negative effects

Van den Pol-van Dasselaar, Corré, Hopster, van Laarhoven, Rougoor, 2002

	No grazing (indoors)	Grazing
Risk of disease introduction due to infection with specific pathogens (e.g. worms, liver fluke)	+	+/-
Exposure to sun	++	+/-
Ill as a result of water quality in ditches	++	+/-
Balanced ration	++	+
Frequent milking	++	+



Effect of grazing – negative effects

Van den Pol-van Dasselaar, Corré, Hopster, van Laarhoven, Rougoor, 2002 and [survey 2022](#)

	No grazing (indoors)	Grazing
Risk of disease introduction due to infection with specific pathogens (e.g. worms, liver fluke)	+	+/-
1. Exposure to sun	++	+/-
Ill as a result of water quality in ditches	++	+/-
2. Balanced ration	++	+
Frequent milking	++	+

Other weather conditions: freezing/snow, wet and rainy, not enough grass

Poisonous plants, insects (thicks and mosquitoes)

Ruminal imbalances and resulting (subacute) metabolic disorders

Attack predators, bloat if grazing high clover swards

(None...)



Effect of grazing

- Grazing gives much more scope for natural behaviour
- May reduce risk of mastitis
- May benefit claw health
- Results in large fluctuations in diet composition
- In the field cows are exposed to rain and sun
- In the field increased risk on pathogens

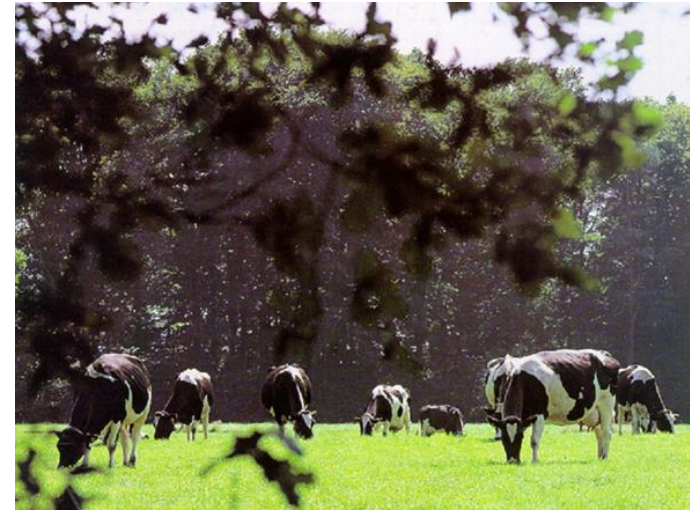


Effect of grazing in general positive for animal welfare

- Exceptions

- *A high merit dairy cow of the HF breed will unlikely satisfy welfare at 24-h grazing without supplementation*
- *Depending on how it is managed / only if executed well*
- *Except if temperatures become too high*
- *Except if walkways are bad or distance to the pastures too long*

Quotes



- *Considering the natural environment of wild bovine species, there is no form of livestock keeping which corresponds better with the natural behaviour of cattle*
- *Natural habitat is not (only) a 'grazing' platform, originally it is (also) wood*
- *Often easier to prevent the disadvantages of grazing than to remedy the welfare disadvantages of stalls*
- *Today modern stables offer a lot of comfort and well being to animals, so that I think that on this point the differences are getting smaller and smaller*

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