

Emerging Practices and Technologies for the Other 23 Hours of Equidae Management

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A historic focus of equine research has been on the time that equids are actively trained, exercised, or handled by humans. Furthermore, research focusing on equine management has mostly been restricted to veterinary interventions aimed at promoting physical health and well-being. In comparison, the time when horses, donkeys, and mules are resting, grazing, stabled, or otherwise out of direct human contact has received little attention. A gap exists in our knowledge about the *telos* of equidae during the time they are not in direct contact with humans. This is despite the way in which this time contributes towards their welfare, health, and behavioral development.

This first special issue of the *International Journal of Equine Science* seeks to shine a spotlight on those "other 23 hours," highlighting novel research, the contribution of innovative technologies, and emerging contemporary management practices that recognize the fundamental importance of the equid's environment and daily rhythms.

Underlining this special issue is a common recognition: the need to understand how the animal has control over its environment in terms of routine, familiarity, and choice. By recognizing the needs of equids during the majority of their day, when they are not interacting with humans, we can reduce stress, prevent injury, improve health outcomes, and promote positive affective states. A debate around the concept of animal agency, especially when considering traditional husbandry practices versus evidence-based welfare and well-being, is also critically important.

The papers in this issue explore a diverse range of topics: from sensor-based monitoring systems that unobtrusively track equine movement, posture, social interactions, and interactions with the environment as indicators of choice and agency, to novel reviews of traditional practices and

their influence on sleep. Looking ahead to the future, the integration of precision livestock farming tools into equid management offers promising, efficiency-saving applications for continuous welfare assessment. Such research helps develop a comprehensive view of equid welfare that extends beyond the training arena, the competition venue, or the utility role the equid has been given.

An important aim of this special issue is to provide a baseline to support emerging areas of study. Equine science and especially welfare studies are often poorly funded. However, small-scale welfare projects provide valuable insights, innovations, and innovative approaches that can be used in future studies. Raising awareness of studies that may be in early development stages or exploring new concepts or methodologies can facilitate future collaboration between researchers, with the goal of fostering more sustainable and ethical relationships between humans and equids.

We hope this special issue inspires equine researchers to consider the use of non-traditional technologies in an industry that remains largely embedded in tradition. We also hope to facilitate multidisciplinary, interdisciplinary, and transdisciplinary collaborations, and that the resulting studies generate information on the lived experiences of our equids at the individual and the collective level. Having a platform to share new ideas and ways in which to use new technologies may well be the starting point. In the future, a special issue may publish studies showing the benefits of adopting practices and tools that place the equid's total lived experience at the center of management. Only by attending to the "other 23 hours" can we truly advance equine science and welfare.

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We thank the authors, reviewers, and readers who contribute to this vital conversation, and most of all, the horses included in these studies. Ultimately, we wish to encourage ongoing research, conversations, discussions, and debates to promote a good life for all equids in our care.

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