



RECOMMENDATION

How empirical sciences may improve livestock welfare and help their management

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Based on reviews by:
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A recommendation of

Sosa S, Pelé M, Debergue E, Kuntz C, Keller B, Robic F, Siegwalt-Baudin F, Richer C, Ramos A, and Sueur C. Impact of group management and transfer on individual sociality in Highland cattle (*Bos Taurus*). *arXiv:1805.11553v4 [q-bio.PE]* (2018), peer-reviewed and recommended by *PCI Ecology*. URL: <https://arxiv.org/abs/1805.11553v4>

Understanding how livestock management is a source of social stress and disturbances for cattle is an important question with potential applications for animal welfare programs and sustainable development. In their article, Sosa and colleagues [1] first propose to evaluate the effects of individual characteristics on dyadic social relationships and on the social dynamics of four groups of cattle. Using network analyses, the authors provide an interesting and complete picture of dyadic interactions among groupmates. Although shown elsewhere, the authors demonstrate that individuals that are close in age and close in rank form stronger dyadic associations than other pairs. Second, the authors take advantage of some transfers of animals between groups -for management purposes- to assess how these transfers affect the social dynamics of groupmates. Their central finding is that the identity of transferred animals is a key-point. In particular, removing offspring strongly destabilizes the social relationships of mothers while adding a bull into a group also profoundly impacts female-female social relationships, as social networks before and after transfer of these key-animals are completely different. In addition, individuals, especially the young ones, that are transferred without familiar conspecifics take more time to socialize with their new group members than individuals transferred with familiar groupmates, generating a potential source of stress. Interestingly, the authors end up their article with some thoughts on the implications of their findings for animal welfare and ethics. This study provides additional evidence that empirical science has a major role to play in providing recommendations regarding societal questions such as livestock management and animal wellbeing.



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References

- [1] Sosa S, Pelé M, Debergue E, Kuntz C, Keller B, Robic F, Siegwalt-Baudin F, Richer C, Ramos A, and Sueur C. Impact of group management and transfer on individual sociality in Highland cattle (*Bos Taurus*). *arXiv:1805.11553v4 [q-bio.PE]* (2018), peer-reviewed and recommended by *PCI Ecology*. URL: <https://arxiv.org/abs/1805.11553v4>.

Appendix

Reviews by Alecia Carter and Sophie Beltran-Bech, DOI: 10.24072/pci.ecology.100003