Assessment and improvement of social coexistence of adult horses in group housing systems in Switzerland

Joan-Bryce Burla[1], Iris Bachmann[2], Edna Hillmann[1]

[1]ETH Zürich, Ethology and Animal Welfare Unit, Universitätstrasse 2, CH – 8092 Zürich, [2] Agroscope – Swiss National Stud Farm, Les Long Prés, CP 191, CH – 1580 Avenches

Key words
horse, group housing, social behaviour, stable design, feeding management, lying behaviour

Aim of the study
The project aimed at identifying 1) ethological parameters for the assessment of the social compatibility of group-housed adult horses and 2) stable design and feeding management factors which influence the social compatibility in order to improve group housing systems with regard to the Swiss animal welfare legislation.

Material and methods
Project A focused on the identification of ethological parameters that are suitable for the assessment of the social compatibility of adult group-housed horses. Various social behaviours, locomotor activity and heart rate parameters were observed in 10 groups with 80 horses. Further, quantitative behavioural observations were compared with short-term qualitative assessments of the group compatibility by experts from video footage. In Project B, the quality of the social coexistence of 50 groups with 390 horses was assessed in relation to stable design and feeding management. Ensuing, Project C investigated the effect of varying dimensions of the littered lying area on the lying behaviour in an experimental study in 8 groups with 38 horses.

Results and significance
Project A: Compatibility, as defined in the legislation, seems to be most closely reflected by levels of aggressive behaviour. Nonetheless, qualitative expert assessments showed low inter-observer reliability and quantitative behavioural observations were not reflected consistently. Project B: The levels of agonistic behaviours were greatly influence by the feeding system; aggressive and threatening behaviour were lowest with feed stands or hay nets. Aggressive behaviour during feeding time was further decreased with an increasing duration of daily hay availability. Consequently, feeding systems should either permit no or only limited contact between individuals or offer widely distributed feeding places and groups should be provided not only with straw but also with hay over a nearly unlimited duration. Project C: The minimum requirements by Swiss law can be stated as generally adequate but should be perceived as minimum and not optimum dimensions, as a 1.5-times enlargement resulted in increased lying durations on litter and a reduction of involuntarily terminated lying bouts in low-ranking horses.

Publications, posters and presentations
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