USAGE AND POTENTIALS OF DIGITALISATION IN ACTIVE STABLES

S. Voigtländer-Schnabel
Nürtingen-Geislingen University, Equine Management, Nürtingen, Germany

voigtlaenders@stud.hfwu.de
+49-176-72590945

Over the past 18 years, active stables became more important in Germany as husbandry system for horses. The main characteristic are computer-controlled feeding stations with an automatic portioning system for concentrated feed and/or hay offered to the horse several times a day. Through software programmes the feeding behaviour of the horses can be analysed and managers can be supported in decision making processes for forage calculation. In addition, the software is able to monitor the horses' health or analyse the best training times for the horses. Economic facilitations are also provided by the software in tracking income and expenses of each horse. The potentials of digital applications are substantial, yet the overall advantage of the technique is mostly unknown by stable owners. Based on a survey design, the research study deals with the issue of digitalisation in active stables and gives answers to the question, why digital potentials are insufficiently used by stable managers. Main results of the research substantiate the argument, that the uptake of digital applications is mainly for feeding procedures, while other data-driven fields (e.g. health monitoring) are rarely applied. The analysis revealed, that most computer-based feeding stations are not connected to the owners' computer (Binomial Test: N=87, P=0.006), which leads to the assumption that further usage of the data is not foreseen. While at the same time feeding data are evaluated daily by the stable owners to control the access to feed for the horses (Binomial Test: N=87, P<0.001). The role of the user was also considered. The analysis showed that there is a strong positive correlation between the functions and user-friendliness of the feeding station (Spearman Rang correlations: N=87, r_s=0.595, P<0.001) but further interest to expand the digital usage is not considered. It can be assumed that, in particular, animal welfare criteria are the predominant reason for building an active stable (Chi-Square Test: N=87, P<0.001). Herewith, the observance of animal-welfare requirements by the self-monitoring of the owners through the continuous analysis of the gained data can be of great advantage in evaluating the fulfilment of some animal-welfare indicators. A lack of knowledge of the usability of existing systems and acceptance barriers connected with missing concepts on data protection and data sovereignty seem to be the key factors for the insufficient use of the available technologies.

Keywords: digitalization; smart farming; computer-based feeding station; equine management; digital application