Abstract text:

The market and the consumers show increasing interest in and demands towards animal welfare, and EU regulation (1099/2009) applying from 2013 determines that larger slaughterhouses (>1000 animal units/year) should document animal welfare. Compliance with these requirements necessitates the development of tools for continuous monitoring of animal welfare. Earlier studies have investigated single elements; however, no aggregated assessment of animal welfare from loading until sticking is available. The aim of the main project is to identify welfare indicators and control points suitable for automatic monitoring and future documentation of animal welfare. The aim of this initial pilot study was to develop a welfare indicator protocol including investigation of correlations between impacts and indicators. Behavioral, clinical and physiological measures based on the Welfare Quality® Protocol (2009) were recorded. 80 focal pigs from 4 different producers were include d and recordings were performed at loading, unloading, during lairage, at stunning and sticking as well as *post mortem*. Behavioral measures were recorded as frequencies and included 'turning back', 'reluctance to move', 'vocalization', 'falls' and 'aggressiveness'. At loading and during lairage, the behavioral recordings were performed by direct observation, whereas at unloading and prior to stunning recordings were performed using video surveillance. Clinical measures consisted of frequencies of 'lameness' and 'skin damage'. Heart rate and body surface temperature were recorded, and blood samples were collected at sticking for lactate and creatine kinase analyses. *Post mortem*, pH and temperature were measured in the *m. longissimus dorsi*. Preliminary descriptive results show that 7.5% of the pigs fell at unloading and 12.5% prior to stunning, 15% turned back at loading and 9% at unloading, 12.5% were reluctant to move at unloading and 7.5% vocalized at loading. Further, lactate seems to depend on handling prior to stunning (P=0.05). These results will be included in the further development of the protocol.

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