

Reactions to intra- und inter-specific tactile stimulation of different body regions in cattle

Dissertation of Claudia Schmied, University of Veterinary Medicine Vienna 2007

Summary:

For improving human-animal interactions in dairy cattle husbandry, three studies on differences in the reactions to tactile stimulation depending on the body region were conducted in cows.

In investigations of social licking (= intra-specific tactile stimulation) in a beef suckler herd with 16 adult cows, both the data of the licking animal (frequency of licking) and of the licked animal (behaviour, heart rate) indicated a preference of the body regions neck ventral (NV) and withers (W) for social licking.

In two further studies the effects of stroking (= inter-specific tactile stimulation) different body regions were investigated with 60 dairy cows in a tie stall. Stroking the NV and W led to more immediate behavioural reactions (neck stretching, ear hanging), as compared to stroking the lateral chest (LC, a body region licked rarely). Moreover, the cows stroked at the neck ventral revealed the lowest heart rate, as compared to stroking the other body regions. These physiological and behavioural responses are similar to those during social licking, thereby indicating that cows may in part perceive human stroking similarly to social licking.

In the third study where cows were stroked regularly at one of the three body regions (NV, W, LC) for three weeks, a general beneficial effect of stroking was detected, because all cows which had been stroked before – independent of the body region – approached the person quicker than control animals with mere presence of the human. According to the different body regions, only stroking of the NV revealed a better effect for improving the animal-human relationship, as compared to the LC and the control. After having been stroked at the neck ventral cows showed an increase of approach behaviour as well as a decrease in avoidance reactions, i.e. more cows having been stroked at the NV allowed touching at their heads. In contrast, stroking the W did not lead to less avoidance reactions as compared to the other body regions.

Considering all findings – the results of social licking, the immediate reactions to stroking and the effects of regular stroking on the animal-human relationship – tactile contact at the neck ventral generally seems to be perceived more positive by cattle as compared to other body regions. Therefore, stroking the neck ventral can be especially recommended in practice.

Contact: Dr. Claudia Schmied, E-Mail: claudia.schmied@vu-wien.ac.at