

Calm in the barn – how do cows perceive their environment?

Cattle are flight animals. Any changes in their housing environment trigger stress. However, in the course of time, the animals adapt to the housing conditions we provide. Then the following applies: the more "boring" the day and the more daily routine, the better for the cow. To avoid unnecessary stress, it is important to understand how cattle perceive their environment.



Hearing as the most important sensory organ

Compared to humans, cattle have a much **more sensitive sense of hearing**. Cows hear frequencies of up to 35 kHz, whereas humans only hear up to 19 kHz (Heffner & Heffner, 1992). Noises in the **ultrasonic range** (< 20 kHz), which can be caused by electric motors, LED lighting systems or rectifiers in the barn, are therefore heard by cows, whereas humans do not perceive them at all¹⁾.

Early warning system for danger

Such hearing in the ultrasonic range serves as an **"early warning system"** for flight animals in case of imminent danger (for example, a cracking branch, a rustling bush). Flocks of birds also emit danger calls in a higher frequency range. For example, a startled flock of sparrows in the barn can cause **stress in cows**¹⁾.

Rubber floor for more calm in the barn

When cows are standing during milking, their **field of vision is considerably restricted**. This alone makes many animals nervous. In addition, the milking equipment causes a wide range of noises that humans cannot hear in full. Experience shows that rubber flooring promotes a **relaxed milking routine**. This way, the animals behave more calmly, because they stand in a safe position. In addition, any dropped milking clusters land much more quietly on the floor. Outside the milking parlour, slipping claws on concrete floors (for example by mounting or short rank fights) cause unrest. Such **noises are also significantly absorbed by rubber** in the walking alley.

¹⁾ Source: Weise, Landwirtschaftliches Bildungszentrum Echem, Vortrag „Sinneswahrnehmung beim Rind, EuroTier digital 2021“

