TECH CARE
Integrating innovative TECHnologies along the value Chain to improve small ruminant welfARE management

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Study of sea transport of sheep

In the Scottish Isles, as in other parts of the world, sheep live in remote regions, including on islands and may need to be transported to larger islands or the mainland at some stage in their lives. This can involve a sea journey. In the UK sheep are transported from the Northern Isles (especially Shetland) to the mainland using a unique 'cassette' system of transport where animals are provided with food and water, and the removal of manure, within the transport container. The welfare of animals undergoing sea transport in these systems has not previously been studied. In a joint project between TechCare and the Scottish Government, three accompanied commercial journeys were studied, using sensors to monitor the movement of the ship, and video analysis of sheep behavior in 36 compartments (1236 animals). The journeys represented calm, moderate and rough sailing conditions, as assessed by motion sensors. Journeys were typically long and noisy, but not overly hot or humid for sheep. Few incidences of falling or postural adjustments were seen but were higher in rough conditions. Sheep tended to lie on calm and moderate journeys but stood when conditions were rough. Animals were not seen eating, drinking or ruminating during transit. No injuries occurred during sailing that could be unambiguously attributed to the sea journey. The use of PLF sensors was valuable to understand the sheep experience of transport and the data suggest that the welfare of the animals was impacted in the short term but with little long-term consequences. Sea journeys are typically more complex than road travel, as the boat can move in more planes and experience of nausea may be more common in movements with high pitch and roll.

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