Update on sensor technologies for performance recording, management and welfare in small ruminants

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Session 13

Update on sensor technologies for performance recording, management and welfare in small ruminants

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Small ruminants (SR) are numerous livestock species with a low uptake of modern technologies. In the EU, most SR are electronically identified with transponders, which is a key opportunity for the implementation of sensors for PLF. Compared to transponders, which send fixed outputs, sensors send variable signals according to the type and intensity of the input. In practice, sensors are classified as non-wearable and wearable. Among them, their use for: behaviour, animal tracking, virtual fencing, automated weighing, performance recording and health problems detection (lameness, mortality, etc.), with special attention to early warning systems, will be analysed in SR. The study of sensors for SR welfare monitoring is the main aim of the Project TechCare (https://techcare-project.eu/), currently in progress. Advanced results showed that prioritization (by experts and stakeholders) of welfare problems throughout the value chain of SR, varies according to countries, productive purposes and production systems (meat and dairy sheep, dairy goats, suckling and fattening lambs/kids). The tools of interest for the detection of welfare problems were also prioritized and are currently under evaluation to be implemented in large scale trials in commercial farms. Stakeholders showed positive interest on PLF uses in SR and wearable sensors seem to be the ideal solution for animal-based indicators, although non-wearable sensors may be an option of interest in large farms due to their cost-benefit. Further research is needed to support the current opportunities of using sensors in SR.
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