

# Avoid livestock stress from undetected water supply failure

If livestock cannot access adequate drinking water then productivity is negatively impacted, whether in daily liveweight gain, milk yield or health. Equally, when a water trough is damaged and flooding occurs, the resulting loss in bedding and time wasted can be significant.

Quality Control and Assurance Schemes such as QMS's Livestock QA are highly valuable in the Scottish red meat sector. Schemes like these are explicit in their guidance on assuring that stock have access to water; water troughs are functional; and contingency plans are in place in the event of failure in water supply.

Given the above, it is important to have systems that:

- Alert farm workers to failure of the water trough feed system or its level control; and
- Provide automated record keeping of responding to such reduced welfare conditions.



No matter what livestock you are dealing with, and whether they are kept in or outdoors, the need for a consistent drinking water supply is a constant across all sectors. Effort invested in the optimization of dry matter intake can be completely undermined by a failure to maintain water intake. Checking that these systems are working, and that water levels are where they should be, forms an important part of the daily 'just in case' checks on a farm.

For outdoor grazing, SEPA is actively discouraging the use of natural water courses due to poaching and sediment displacement into the water. This is resulting in an increase in the numbers of remote water troughs being used and requiring checks. The time consumed by these checks is a drain on farm time and resource.

Maintaining consistent records to meet standards and market outlet requirements can be onerous. An automated system to provide evidence when required is beneficial in terms of consistency and time saved.

The SmartRural solution is to deploy simple sensors in the water trough. For example, one sits off the bottom, but below the normal working water level. These devices detect if they are sitting in water (all is good) or if water is not present and indicating that the level has dropped, and something is wrong.

If a 'water is not present' signal is detected, the software triggers one or more alarms, identifying the trough's location and notifying the recipient(s) that intervention is required.

Records will show when the system was operating normally and the response to a 'water is not present' signal, providing evidence of good management and animal husbandry.

