



PRACTICE ABSTRACT

Digital technology

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RITCHIE BEEF MONITORING UNIT

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The Ritchie Beef Monitoring Unit is a weighing crate that allows individual animal weights to be recorded automatically. This allows an average daily weight to be calculated for individual animals without handling the livestock, thereby reducing stress for both the livestock and handler. Cattle weights are recorded, along with their individual tag numbers (Electronic ID tags), each time they step into the crate to access water. The weight data for each animal is stored on the cloud. Average daily weights are calculated and made accessible for the stockman via the website or app. The use of solar panels to provide power for the unit further reduces costs and environmental impact. The unit is easy to install, relatively mobile and requires little maintenance. The website and app ensure the data is processed, so no training or new skills are required before the unit can be successfully operated.

Average daily weights for cattle allow the stockman to monitor cattle weight gain and performance. The access to data allows constant remote monitoring of intensive livestock and therefore early detection of abnormal weight changes, indicative of potential husbandry issues including disease, nutrition and management issues. Early intervention can improve general health of livestock resulting in better economic returns. Average daily individual weights can be monitored to determine when individual animals are ready for slaughter, reducing feed inputs and ensuring optimal weights are achieved.

Close monitoring of cattle weights can therefore result in achieving optimal standard weight for slaughter giving improved economic returns. In addition, the close monitoring of individual cattle weight can reduce feed and bedding requirements. This has an additional environmental benefit and results in improved sustainable cattle production.

Application scenario

Monitoring and logging average daily cattle weight for individual animals. Performance control and early identification of disease, nutrition and management issues

Digital technologies

EID tag reading, weight recording, cloud-based data management, software interface, website, mobile app

Socio-economic impact

- Economic: Optimal weight at slaughter, weight control improving economic returns, reduced labour costs
- Environmental: Reduced feed and bedding, early detection of potential health problems reducing administration of medicines including antimicrobials
- Social: Reduced stressful labour handling tasks, improved herd management

More info: <https://www.ritchie-d.co.uk/product/details/211>



Purpose of the tool

The Ritchie Beef Monitoring Unit is a weighing crate that allows individual animal weights to be recorded automatically when the animal accesses water. As the animal returns to the water multiple weights can be recorded and an average daily weight calculated. Automatic weight recording reduces livestock handling, thereby reducing stress of the livestock and of the handler and reducing labour costs. The cattle weights are recorded along with their individual tag numbers (Electronic ID tags required), and the data is stored on the cloud each time the cattle steps into the crate to access water. Average daily weights are calculated, which are accessed by the stockman via the website or app, and these can maximise economic returns whilst reducing adverse environmental impact



Source: [Ritchie](#)

Description of the tool

The Ritchie Beef Monitoring Unit reads individual EID tags and records the associated weight of individual intensively-reared livestock. The data is stored in the cloud and data management software processes the data to produce average daily weights for individual animals. The stock manager can access the individual average daily weights to ensure the optimal growth of the livestock is achieved. The management tool allows for early detection of abnormal weight gain or loss. Immediate and early preventive measures can be implemented to ensure the health of the livestock is maintained. Additional livestock handling can cause stress resulting in a drop in weight gain. The automatic weight recording reduces stress whilst allowing data to be recorded and livestock to be routinely monitored remotely. The software interface allows the unit to be used by farm owners, stock managers and unskilled livestock handlers, without additional training.

Areas of socio-economic impacts

Social	Reduced handling of livestock for a less stressful procedure for both livestock and stock handlers. Although this leads to reduced labour, for this task, additional labour is required to monitor and manage the data. Ultimately, early detection of potential husbandry problems may lead to a change in tasks rather than a drop in required labour.
Economic	Optimal individual livestock standard weight at slaughter. The ability to remotely monitor live weights will lead to better weight control, improving economic returns. Feed and bedding costs will be reduced, and husbandry costs associated with early detection of potential husbandry issues may also be reduced.
Environmental	Reduced feed and bedding. Optimal feeding and live weight gains will lead to less feed and bedding being required. Early detection of potential health problems could lead to reduced administration of medicines, including antimicrobials that increase resistance, and therefore less environmental impact.