

Poor Cattle Temperament Reduces Productivity

Is temperament heritable and consistent over time?

The Challenge

Working with cattle can be dangerous – made worse by high livestock numbers per labour unit and lone working. Post-calving can also see cows become more aggressive with their handlers.

A better understanding of temperament and its consistency over time as well as its heritability and the relationship with productivity will support future breeding decisions.



The Research

A five-year research project observing cattle temperament and measuring subsequent performance started in 2011 at the SRUC Beef Research Centre.

Flightiness of youngstock and the defensiveness of newly-calved cows were used as a measure of cattle temperament.

Flightiness of youngstock was measured using restlessness in the crush, flight speed on exit, and ease of handling when isolated in a small pen. All 144 animals were monitored four times.

Cow defensiveness was recorded in 143 cows post calving over two parities as the behaviour and proximity of the cow to the handler at calf tagging; and maternal behaviours for three hours post-calving (as monitored by video camera).

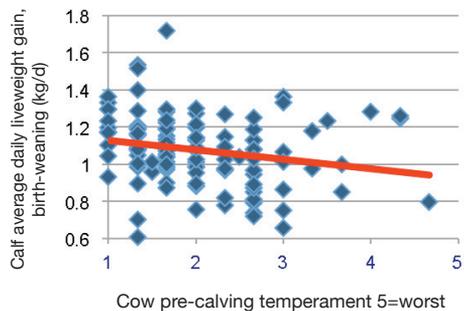
The Results

Flightiness in youngstock has been found to be moderately heritable.

A link has been found between poor temperament and poor productivity (growth rate and ultimate sale weight).

The research shows that:

- Pregnant cows that were flighty during handling in the crush produced calves with a lighter birth weight and lower growth rate to weaning. This is shown in the table below.



- The common belief that defensive cows are better mothers is untrue. Defensive cows were no different to non-defensive cows in the maternal care shown to their calf (eg licking, suckling) and there was no effect on calf growth rate.
- Over the monitoring period both youngstock and cows were consistent in their temperament during handling in the crush. Cows were also consistent over parities in their defensiveness of the calf.
- Youngstock that were flighty during routine handling grew more slowly during fattening. Extremely calm finishing cattle had a 15% higher growth rate compared to extremely flighty finishing cattle.

The Impact

Flightiness in youngstock is heritable – with the genetic likelihood being between 20-40%. The research also indicates that a tendency of recently calved cows to attack a handler (maternal defensiveness) may also be heritable.

Genetic selection for moderate temperament could, therefore, have significant opportunities to improve farm safety and productivity.

Further Information

For more information on farm business management, beef systems and breeding contact SAC Consulting beef and sheep specialist at beefandsheep@sac.co.uk

Project Detail

Project date: 2011-2016.

The project was led by Simon.turner@sruc.ac.uk of the Animal and Veterinary Sciences Group in collaboration with staff from the Future Farming Systems Group at SRUC.

This work was funded by the Scottish Government Strategic Research Portfolio. The research presented above was partially replicated on a leading commercial farm to validate the results. We gratefully acknowledge the openness and help of the owner and staff of this unit.

Link to further information: Two SRUC technical notes have been produced which give suggestions on ways of modifying existing handling systems to improve cattle movement (TN564) and suggestions for new builds (TN 565).

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