

# Teagasc Grange – beef

## Suckler calf health and welfare

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**T**he survival and performance of the suckler calf depends on the development of a strong cow-calf bond.

Calves are born with an undeveloped immune system and rely on antibodies and other components in colostrum (first-milk) for protection from disease, as well as nutrition.

Since the ability to absorb colostrum antibodies starts to decline after birth, suckling behaviour of newborn calves is very important for their health and welfare.

A primary identifiable risk factor associated with the failure of passive immunity in calves is delayed colostrum consumption.

At Teagasc Grange, we are studying cow-calf bond development and suckling behaviour post-partum in diverse cow genotypes, as a means to enhance management strategies for improving calf passive immunity.

We are currently working on assisted versus unassisted colostrum feeding, monitoring the suckle reflex



Noeleen Brereton.

for each calf at 10 minutes post-partum and identifying calves that require intervention.

The aim is to promote calf survival, which will enhance beef farm profitability.

## Tackling bovine respiratory disease

New diagnostics for rapid detection and identification of the causative agents of bovine respiratory disease (BRD).

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**C**onventional methods of bovine respiratory disease (BRD) classification involve assessing animals using a clinical respiratory score (CRS) and a scan of the animal's lungs by thoracic ultrasonography (TUS).

In addition to the methods of CRS and TUS, molecular and in-vitro culture investigations into the causative agents of BRD are quantified using qPCR.

At Teagasc Grange, two novel promising diagnostic tools to detect BRD pathogenic agents are optimised and in use, namely the Oxford Nanopore MinION M1kC and a protocol for 16S ribosomal amplicon sequencing.



Kerrie Duffy.