

Calving Special

Calving detection tech: Three options compared

From smart boluses to cameras and tail-mounted devices, the evolution of technology means unnecessary late-night trips to the calving shed can be a thing of the past. Three farmers share how they have got on with technologies they invested in to ease calving management. **Aly Balsom** reports

Smaxtec boluses

Smart boluses allow the team at Black Moss Farm, Preston, to predict when a cow will calve, track calving progress and focus labour where it is needed.

A cow's core body temperature will naturally drop on average 10-15 hours before she calves. Smaxtec boluses monitor this temperature drop and generate a calving alert, which is sent to a smartphone app.

The team can then monitor the cow carefully, explains herd manager Jamie Waller. "It usually gives you a 16-hour window to say when she's expected to calve," he explains.

Should calving not progress, the team can assist or administer calcium to help with muscle contractions. A further alert is sent if body temperature drops too far, as this could indicate subclinical milk fever.

Farm manager Ed Swindlehurst says the cow will then be checked and given calcium. "I'd say we've got fewer cases that are problematic as we can cure them earlier," he says, adding that clinical milk fever is rare.

Calving progression is visible on a graph, which makes it easy to assess when the birth is imminent. Jamie or Ed can then go to the calving yard or delegate the task.

Jamie says the boluses work well alongside existing cameras on-farm, as he can visually check cows on the camera in response to calving progression information.



A Smaxtec bolus. Above



Ed Swindlehurst (left) and Jamie Waller

FARM FACTS

Black Moss Farm, Preston, Lancashire

- 227ha
- 287 Holsteins, housed full time
- 305-day yields of 10,700 litres a cow at 3.4% protein and 4.15% fat

SMAXTEC - OVERVIEW

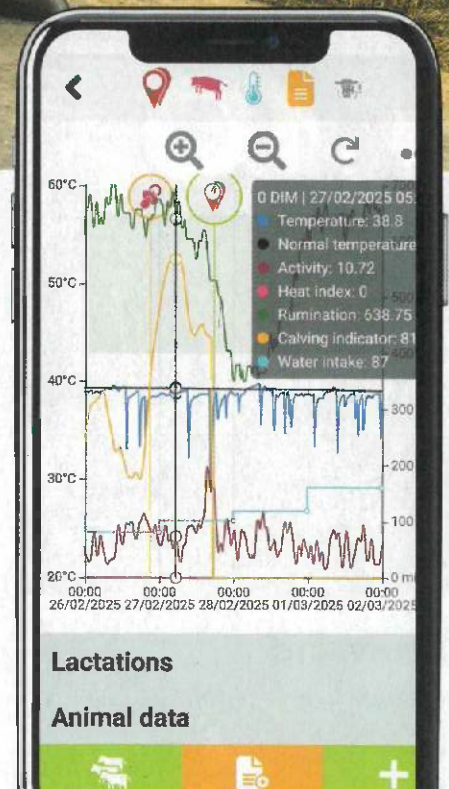
Smaxtec boluses sit in the reticulum of the cow. Data are collected by the bolus every seven minutes and uploaded to the cloud every half-hour, via one or more base stations. The data are analysed and viewed via an app or computer, with alerts sent to the app to flag up calvings, heats, health and feeding issues.

Costs (Black Moss Farm)

- One base station, climate sensor, bolus applicator, software and consulting package: £5,500
- Boluses: £30 each
- Set-up costs: £14,500
- Monthly subscription: £2.50/active bolus for herds of 100-plus cows (£3/bolus a month for smaller herds). Costs exclude VAT

Key considerations

- Can be used to monitor health, heats, water intakes and feeding, as well as calving
- Can integrate with most herd management systems
- Each bolus can only be used once
- Multiple base stations may be



Cameras

Having a camera in the calving yard at Longmoor Farm, Gillingham, gives the Rogers family the confidence to limit interventions at calving. The camera was installed after the family lost a high-value heifer calf at calving. Stuart Rogers, who farms with his wife, Helen, and father, Colin, says he now would not be without it. The camera can be moved remotely and has a zoom function that allows for an ear tag number to be read from a phone or screen in the office.

Stuart says the main benefit is knowing when calving has started and how quickly it is progressing. This allows for a "very hands-off" approach. "A lot of people want to jump in and get a calf out and get on with the day. The cameras allow us to factor it into the day," Stuart says. Less intervention at calving has reduced the incidence of retained foetal membranes, which has cut antibiotics use. Knowing how calving is progressing and when to intervene has also contributed to a drop in stillbirth rate to 3.5% since the camera was installed.

In addition, the ability to check the calving yard from the farmhouse has eliminated the need for late-night visits. "Back in the day, you had to go and have a look late at night," says Stuart. "Now you just go on the phone or on the screen if you're in the office."



Stuart Rogers' camera can rotate 360deg and zoom down to ear tag level (image from footage)



FARM FACTS

Longmoor Farm, Gillingham, Dorset

- 190ha farmed
- 245 pedigree Holstein cows
- 11,500 litres a cow a year at 4.3% fat and 3.5% protein

CAMERAS - OVERVIEW

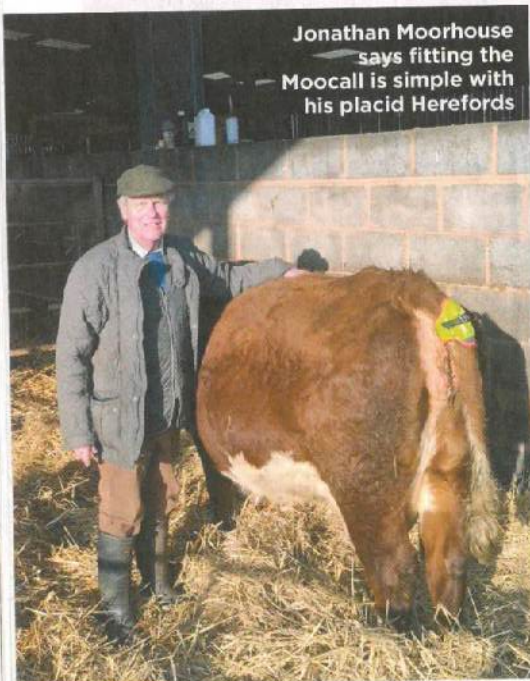
Costs (Longmoor Farm)

- £875 including VAT (hard-wired connection, excludes installation cost)

Key considerations

- Night vision capabilities and degree of lighting needed vary between brands

- Checking cameras needs to be built into the daily routine
- Consider wireless options - these eliminate the need to lay cables but require reliable internet (wi-fi or 4G)
- Can be used in multiple places to monitor different groups and for safety



Jonathan Moorhouse says fitting the Moomall is simple with his placid Herefords

Moomall

A simple tail-mounted device that monitors tail movement and sends a text message when a cow starts to calve has revolutionised calving for 76-year-old pedigree Hereford breeder Jonathan Moorhouse.

Jonathan uses a Moomall monitor at calving, rotating it between cows that are likely to calve during the night. In the daytime, there are enough stockpeople to monitor animals visually. In addition, a camera that can be rotated through 360deg is mounted near the calving pen, with footage viewed on a phone or tablet. "Any loss of a calf is a failure on my part, so the technology is there to minimise losses," he explains.

A text message will be sent at the first signs of calving, at which point he goes to the camera to see how the cow is getting on. A second alert is sent as the cow is about to calve.

Jonathan says the technology has saved lives "without a doubt" by ensuring he is cow-side as soon as the calf is born. Knowing exactly when a cow starts calving also allows calving progression to be tracked and issues to be picked up promptly.

"It means you don't have to be sitting in a cold shed waiting for something to calve: you can be somewhere a bit warmer.

MOOCALL - OVERVIEW

Moomall is a tail-mounted sensor that automatically measures tail movement, which increases around calving. At a certain intensity, a text is sent to the farmer's phone or via the app.

Costs (Cheddar Marsh Farm)

- £239 plus VAT each (Wynnstay)
- Annual subscription of £120/device payable to Moomall with a 10% discount available if the customer has more than one

Key considerations

- Devices have to be moved between cows
- Must be positioned correctly, high up on the tail
- Good stockmanship needed to put the device on the right cow at the right time
- Cows need to be easy to handle safely when attaching the device
- Only monitors start of calving

FARM FACTS

Cheddar Marsh Farm, Stogumber, Somerset

- 61ha farmed
- Spring calving pedigree Friesian herd

tolerable," he adds. As the herd is well handle and "placid", he finds it easy to walk up