

Technology proves its worth

We visited two Pembrokeshire-based units where automated heat detection collars and associated infrastructure are improving efficiency and herd fertility.

TEXT DEBBIE JAMES



Aled Vaughan: "SenseHub has led to a 20% increase in submission rates"

At Cilast Uchaf, near Boncath, technology is improving heat detection efficiency in the Vaughan family's high yielding Holstein herd, with submission rates moving from 50% to 70% in just 12 months.

As cow numbers hit 400, heat detection became one of the biggest challenges when managing the all-year-round calving pedigree herd. Heats were sometimes missed, or cows were incorrectly identified as bulling. And this had repercussions for milk yield because it increased the number of days cows were producing milk at a lower daily yield.

"We wanted to improve the accuracy of heat detection," says Aled Vaughan, who farms in partnership with his brother, Gerwyn, and parents, Tom and Gwyneth. "We already record with NMR and we purchased Allflex's SenseHub in 2018, which monitors activity through transponders fitted to neck collars."

Captured information from the collar transponder is sent at regular intervals throughout the day, via antenna, to the farm computer or smart phone. When activity peaks and rumination drops this indicates that a cow is bulling and this is flagged up.

Heats on PC

"Heat detection is now as simple as checking the computer for alerts and holding back cows listed for checking and insemination," says Aled.

Now in his third year of using the system, he says that one of the major benefits has been a 20% increase in submission rates. According to Uniform-Agri, NMR's herd management software program that he subscribes

FARM FACTS CILAST UCHAF

- Farm size : **243 hectares**
- Yield : **10,000kg of milk at 4.1% fat and 3.4% protein**
- Milk buyer : **Arla**
- Feeding system : **cows fed a TMR comprising grass silage, home-grown wholecrop, sugarbeet meal and protein blend**
- Feeding at milking : **cake in the parlour, to a maximum of 7kg/cow/day**

NMR package

SenseHub installations are subject to a site-survey before any order is placed and newcomers to the system will be fully trained. Users will then have access to NMR's training sessions, either on farm or remotely, and in-person support from the field team and the experienced NMR software support call centre.

to, this improvement is worth £5,500 a year. And while submission rates have increased, the calving index has decreased – from 405 days to 395 days. Based on a cost of £3.50 for each open day, this is worth a further £11,500 to the business.

“Uniform-Agri links our NMR data and SenseHub information so we can see the full value of the system,” explains Aled. “We record the origin of oestrus through the software and this shows that 15% is coming from the collars alone.”

Intake and rumination technology is integrated into his SenseHub system and any deviations from a norm show up on the screen. This is a sign that Allflex’s Paul Mitcham encourages producers to heed because it can often be the first sign of a problem. Early intervention can avoid health, production and fertility problems.

“A combination of rumination and activity data makes heat detection more accurate and has the added benefit of providing information on cow health,” he says.

Often cows that are not showing any visual signs of illness are flagged up. Aled has seen this happen in the herd. “We have had cases where we receive an alert and the cow looks perfectly OK, but when we check her temperature it is raised,” he says. “By monitoring cow activity we can spot problem cows sooner, and it’s easy to pick them up off the screen.

“We no longer need to monitor heat detection visually – we know that the technology is doing the work for us. And that frees us up to get other jobs done.”

Around 40% of the farm’s capital outlay in SenseHub was met by a Welsh Government Farm Business Grant, so this reduced the Vaughan’s investment to around £26,000.

With the combination of the increased submission rates and the reduced calving index worth £17,000 a year, Aled says that the business saw a return on this investment in less than two years.

Handling technology

By linking automated heat technology to a segregation gate cows on heat can now be automatically drafted for AI after each milking at Tedion Farm, near Lawrenny. Linking the unit’s Allflex SenseHub to a three-way sorting gate has eased herd management to such an extent that Laura Elliott, who farms with her mother, Rachel, and sister, Kathy, compares it to having an extra person in the parlour.

The Elliotts run a crossbred herd of 270 cows, calving in a 12-week block from February. The business relies on family labour and employs one full-time milker, Lisa Bassett. “We were looking for an alternative to drafting cows manually,” says Laura.

“The SenseHub link ticked all the boxes and replaced a

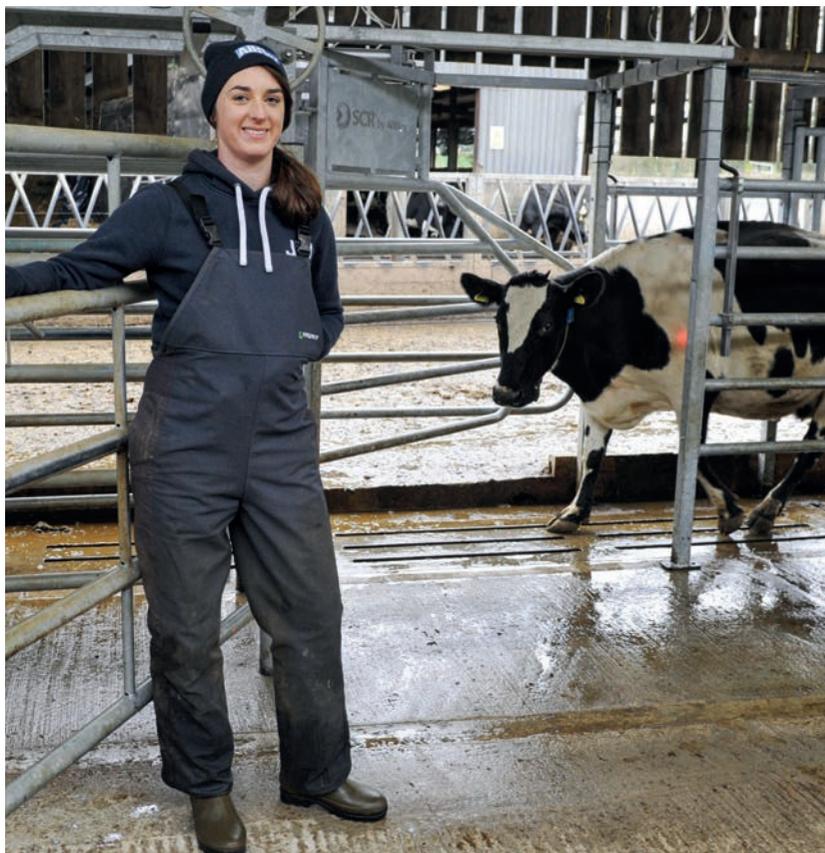
Welsh grants

In Wales, a new application window for the Farm Business Grant, which can offset the cost of collars and sorting gates, opens on March 2, 2020 for 40 days.

Further details are available on the [National Assembly for Wales website](#) or by contacting Meirrh Rhys Jones at NMR: meirrh@nmp.com

FARM FACTS TEDION FARM

Farm size	: 121 hectares
Milking parlour	: 18:36 swing-over parlour
Yield	: 6,300kg of milk per cow at 500kg milk solids, from one tonne of concentrates
Milk buyer	: Dairy Partners
System	: block calving February to April
Fertility	: 8% empty rate



Laura Elliott: “The link from the heat technology to the segregation gate reduces labour requirements in the parlour”

paper list pinned in the parlour, which wasn’t practical.” Manual drafting not only increased labour requirements but also slowed down milking and increased stress on cows and milkers. “We bought the system through NMR and it qualified for a Welsh Government Farm Business Grant. It cost us £18,000,” adds Laura.

The savings in labour costs alone will more than pay for the capital outlay, because only one person is required in the parlour – even when they are drafting cows out for AI or treatment. If cows are receiving treatment, they are drafted into a handling race and crush.

The technology has also removed the need for the Elliotts to have home-bred bulls on farm to sweep up. And they are putting the data from the collars to full use. Cows with irregular heats, anoestrus or suspected abortions are automatically sorted out for vet visits.

“They’re treated sooner and it will hopefully mean that we get a few more cows in calf earlier,” says Laura. “I find the data useful and reassuring, and it’s a positive step forward in our herd management.”

The Elliotts, in conjunction with NMR, will host an open day at Tedion on April 1, 2020. |