

Measuring and Monitoring Animal Performance

for profitable livestock farming



CONTENTS

- 4 - 5 Animal 'intelligence' key in sustainable farming
- 6 - 9 The intelligence of the humble ear tag
- 10 - 11 Information vital for quality lamb producer
- 12 - 13 Weight recording essential in heifer rearing efficiency
- 14 - 15 Tag and test integral in BVD control

INTRODUCTION

UK livestock farmers now operate in a global market place, producing milk, meat and wool in competition with the best around the world. Government support has been a given for our industry for two generations - insulating businesses to an extent from the vagaries of the weather, price volatility and fluctuating demand - but it can no longer be assumed going forward.

Whatever the post-Brexit situation, UK livestock farmers must develop greater resilience for the future, to allow them to withstand global pressures outside their control. This can only be achieved through greater efficiency and accuracy in all aspects of production, and it applies whatever the size or scale of the business.

Information is king, and will continue to lie at the heart of the more efficient livestock

businesses. So, whether monitoring growth rates, identifying disease or pinpointing key aspects of individual animal performance, an ability to handle and efficiently assess animals will become more and more important.

At Allflex we are focused on the whole area of livestock management, providing tools to equip business for a more sustainable future. We hope this brochure provides a useful overview of what we do and gives some insight into the opportunities that exist to measure and manage herds and flocks with greater efficiency.

We welcome feedback always, as we strive to make our products and service better and more compatible with future needs. We look forward to continuing to work with you as a customer, or developing new relationships with those of you we are yet to meet.

THE ALLFLEX UK GROUP



The Allflex Group is a global leader in the design, manufacture and delivery of animal identification technology – helping livestock producers use individual animal information as a key management tool.

SCR Heatime is part of the Allflex UK Group. SCR offers dairy and beef farmers a real-time monitoring solution (for health, nutrition and fertility) that can maximise herd efficiency through the provision of individual cow monitoring data.

We also manufacture and distribute Alligator mobile sheep handling systems, and distribute Prattley mobile sheep and cattle handling systems, Tru-Test electronic weighing solutions and Heiniger clipping and shearing equipment.

Whilst our core focus is providing identification and monitoring solutions we also supply end-user farmers with health and husbandry products via a network of some 750 Trade Partner stockists throughout the UK and Ireland.



A photograph showing a person's hands holding a tablet computer, scanning an ear tag on a sheep. The scene is dimly lit, with a strong greenish-yellow light source, possibly a scanner or a specific lighting setup, highlighting the sheep and the person's hands. The sheep is in the foreground, and the person is partially visible, focused on the task.

'INTELLIGENCE' KEY TO SUSTAINABLE LIVESTOCK PRODUCTION

Efficient and profitable livestock production is becoming increasingly reliant on accurate, real-time data which, when interpreted, can be used to make informed management decisions at a farm level.

The collection, monitoring and archiving of this data provides “intelligence” on key management parameters, such as performance, efficiency, welfare and genetic progress. Use of “intelligence” in this way is increasingly a key ingredient in sustainable production.

This is certainly the view of The Allflex Group, world leaders in the design, manufacture and delivery of animal identification and perhaps best known for its market-leading ear tags.

“At one time just a simple method of animal identification, the humble ear tag has an increasingly significant role to play in this new area of livestock farming intelligence,” says Mark Lawrence, Group Marketing Manager, The Allflex (UK) Group Ltd. “In-ear tag technology can help to improve livestock performance and profitability, especially when allied with

integrated handling and weighing systems.

“Dairy farmers routinely use information provided by milking parlour software, such as milk yield and somatic cell counts, to make informed management decisions for breeding or marketing. In the sheep and beef sectors the use of EID (Electronic Identification) tags linked to farm management software can offer the same opportunity to focus on those factors most likely to influence profitability such as daily liveweight gain and finishing weights.”

Of course information or “intelligence” on individual animals can take many forms and cattle ear tags can also play their part in the management and eradication of disease - for example BVD. Tissue Sampling Tags (TST) take a small biopsy of the ear at the point of tagging and when analysed can provide information about the disease status of the animal. This can facilitate informed culling and breeding decisions by allowing Persistently Infected (PI) animals – those that carry and spread the disease – to be identified.

Well known for its livestock tags, Allflex is perhaps less well known for its broader business operations within the UK and wider global interests.

In the UK, the Allflex (UK) Group has grown rapidly over the past 24

months and now incorporates brands such as Cox, Ritchey, Fearing and SCR Heatime. The core focus is supplying livestock identification solutions but an important component of the business model is supplying end-user farmers with health and husbandry products via a network of Trade Partner stockists. Indeed the group works with over 750 such companies throughout the UK and Ireland, which in their own right provide an important business and often social role in their local livestock-based communities.

Whilst the core business focus is on livestock identification across a wide species spread

Cattle ear tags are now playing their part in the management and eradication of diseases such as BVD

(including fish, crocodiles! and camels), The Allflex UK Group is also involved in supplying industrial markets too. An important part of the

business includes the supply of identification products such as RFID (Radio Frequency Identification)

tags to “non-livestock” businesses such as power stations, hospitals, the fire service and

industrial plants. In this setting the tags are used to assist the management of stock inventory or ensure adherence to health and safety regulations. Interestingly tags from the “Ritchey ID” business (part of the Allflex UK Group) were used to help track the athlete bags around the Rio Olympics venues.

With a global value in excess of £1bn, the Allflex Group operates in over 100 countries around the world.



Allflex has been at the forefront of ‘animal intelligence’ technology, such as the development of tissue sampling tags (TST) that are playing a key role, for example, in the eradication of BVD.

The **INTELLIGENCE** of the humble ear tag

Tagging and traceability are a core element of livestock farming these days, but what is becoming more widespread is the use of the “intelligence” gleaned from the humble ear tag. Livestock farmers are already using ear tags to keep records, a legal requirement, and by taking it a step further, they can use this resource of real-time data to make informed management decisions on the farm. This intelligence gathering and analysis is becoming an increasingly important factor in efficient, profitable and sustainable livestock production.

Tom and Kay Hutchinson, tenant

farmers on a hill farm in County Durham and stars of the BBC’s *Addicted to Sheep*, invested in electronic identification and data gathering technology for the first time this year with the Allflex-supplied RS420 stick reader, which links with a flock and herd management application called iLivestock.

“This is the way everything is going and we wanted to learn before it became a necessity,” says Kay, who admits she had only really worked with basic Word and email programmes before. “We tag and record all our stock anyway, and there’s a lot of paperwork involved with

“This is the way everything is going and we wanted to learn before it became a necessity”

traceability especially with the pedigree breeds. With an EID stick reader, it is just so quick and easy. It scans the flock and uploads the information onto the app while we’re still in the field. It records so much including meds, withdrawals and lambing details, and we can add our own notes, so over time we can use that data to make the flock more efficient and productive. It keeps us right, and it also makes us less reliant on labour.”

Farming at Bail Hill near Barnard Castle, the Hutchinsons have a flock of 180 breeding ewes, including 100 pedigree Swaledales. They are also renowned for their Kingshaugh

prefix of pedigree Limousin and Hereford cattle.

“We liked that this system has sheep and cattle records in one place,” says Tom. “Everything is so instant and if you have an inspection, there’s no panic or major preparation as it’s all there on the iPad or mobile. It’s really great at tugging time too. It’s easy to think you will remember individual animals from one year to the next, but so much happens in between. With the iLivestock app, I can track back as far as great-grandparents and double check I am not putting a ewe in a field that’s related to the tup. It compensates for my bad memory! I just love the scope of what you can do with the app, and it’s constantly moving forward. It’s just a much more efficient and accurate way of working.”

When considering a leap into the world of technology, it can be a daunting process both financially and practically, but the Allflex technology has been designed so you can build up in stages, and also to be

Continued on page 8





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straightforward to use. You can start simply with ear tags and the iLivestock app to log key information.

The stick reader may come next, and, ultimately you can invest in handling and weighing systems, that all link to iLivestock.

Corinna Cowin of Allflex, who hosted workshops earlier in the year focusing on getting the most out of the software, says,

“We are seeing livestock farmers engaging more and more with the technology, and, as a result, getting more out of it. The EID stick reader and iLivestock software essentially allows farmers to make better use of the data that tags provide. This can be keeping within the law on recording stock movements or building up a picture of their stock performance all the way from tugging and scanning through to production. Farmers can look back to see which ewes had a good lambing, or those that didn’t have milk, and use all this data to maximise flock performance and create efficiencies in their

business. The information is there and you can use it in so many ways.”

The iLivestock app also allows you to create custom groups and record actions against multiple animals, and it recognises different holding numbers and records them appropriately. This is crucial for the Hutchinson family given that Tom’s father and the couple’s three young children have their own flocks of Swaledale and Herdwicks. They

Both Kay and Tom have appreciated the support from Allflex when charting this new territory

have found that routine tasks such as injecting or livestock movements on sales days are much easier using the stick reader.

“We scanned 53 sheep this morning in less than a minute,” says Tom, “It takes out the time and the stress. Before we had the stick reader, I was calling out tag numbers which

so often get lost in translation by the time they are written down, or sometimes they are just difficult to read. With the stick reader, you get the accuracy. It’s so quick that we can scan them on the day of the mart, and after a sale, you don’t have the problem of trying to locate any missing tag numbers. When it comes to administering medication, the app logs withdrawal periods for each animal medicated, and sends a reminder text when the period is over. It just makes life so much easier.

“Allflex have been very good from the start,” Kay volunteers. “The aftercare is second to none, and if there’s a glitch they talk you through it. They are constantly evolving the system, and have been really responsive to our feedback. We know what we need in the field, while their experience is technical, so you can work with them to improve it all the time. Often when we have suggested something, we will see it in the next update. It’s amazing that we can get all this information from an ear tag, and going forward I can see us using the iLivestock app more.”



INFORMATION KEY TO PROGRESS FOR QUALITY LAMB PRODUCER

Adoption of new technology, including EID with electronic weighing and a stick reader plus associated recording, is adding a new level of precision management to lamb production at Maesderwen in Abermule, Powys.

The 1,200 ewe upland sheep enterprise and 300 retained replacements, run by the Orrells family, aims to meet its supply commitments to Waitrose for a full ten months of the year, marketing a consistent flow of quality lambs as close as possible to the 21.5kg optimum dead carcase weight.

With the majority of lambs reared off grass and fodder crops for less intensive finishing, regular monitoring of growth rates has become an essential part of routine management.

“Having the facilities to quickly and easily weigh our lambs is partly about being sure we market them at optimum weights,” explains Gary Orrells, “but it is also a tremendous management aid that is allowing us to learn so much and constantly improve our system.

“With the early market lambs where growth rates are critical, we are weighing them monthly and then as often as weekly as they approach finishing weights. This regular monitoring has enabled us to assess the value of varying feed regimes, understand the impact of changes in the weather and know when best to move electric fences, and so on.

“Growth rates are less important with the later born lambs, but regular weighing means we can manage our grazing more effectively and achieve the consistent output of finished lambs that our contract requires. It’s also really important when it comes to other management points such as dose rates with wormers, for example.”

Maesderwen extends to around 1,100 acres in total and includes some arable and a 120-cow spring calving beef suckler herd in addition to the sheep enterprise. The 1,200 ewe flock is run by Gary and his fulltime stockman Chris Thomas, with valuable assistance provided by Gary’s wife Anwen and children Elin and Jonathan. The flock

is made up of around 500 improved Welsh Mountain – which are maintained pure and bred to Aberfield rams to provide homegrown replacements - and 700 Welsh x Aberfield mules. The mules are bred to Abermax rams selected on their EBVs to produce lambs that will thrive and finish on a forage-based diet.

Use of the best available technology is, according to Gary, the best way to nullify rising costs of production, and this applies to all aspects of the business.

“We are reseeded our grassland regularly with the best available grasses, using fodder crops to extend our grazing potential and using what we believe are the most advanced sheep genetics for our system,” he says. “On top of having these elements right, we are then monitoring performance closely to ensure our management is as good as it can be. Every farm is different so it’s down to us to find ways to make the best of our particular situation.”



Gary Orrells considers his Prattley mobile handling equipment and Tru-Test EasiWeigh7i Indicator as essential management aids that help him meet market requirements. Success has been recognised in 2016 with the award of Waitrose Lamb Producer of the Year.

MONITORING GROWTH RATE THROUGH ACCURATE WEIGHING KEY TO EFFICIENCY

Early observations from AHDB Dairy's Calf-To-Calving project highlight the importance of regular weighing, particularly in younger calves when growth rates are so critical to future development and performance.

According to AHDB Dairy Technical Manager Andy Dodd, project manager for the initiative, there is evidence that farmers consistently over-estimate calf growth rates and could therefore be missing opportunities to improve business efficiency.

Calf-To-Calving involves a nationwide series of farm open days, on demonstration units that have been closely monitoring the performance of groups of ten calves. Using the real on-farm experience of the monitor farms, the project aims to underline some important fundamentals that contribute to efficient heifer management up to first calving.

The initiative is based on several well-proven factors, all of which could help improve performance on many units:

- 1) Feed conversion efficiency is highest in calves in the pre-weaning period.
- 2) Faster growing calves go on to give more milk and live longer in the herd.
- 3) Heifers that calve at two years of age cost less to rear, start repaying their rearing costs sooner and last longer in the herd than older heifers at calving.

Participating farms are given a number of practical targets that relate to these fundamental principles, as follows:

- To double calves' birth weight by eight weeks of age.
- To rear heifers to 50% of mature body weight by 12 months of age.
- To achieve 90% of mature body weight just before calving.
- To know the mature body weight of cows in the herd.

With these in mind, Andy Dodd reports some interesting observations.

"Although calves were apparently doing well up

to weaning, around 72% were under-weight at this critical stage, suggesting that calf weights are commonly over-estimated," he said.

"I've also found that both farmers and vets can over- and under-estimate weights in calves over six months of age, and this is significant in the context of the accuracy with which wormers and antibiotics are used, for example. When it comes to mature cows, the tendency is to under-estimate."

Achieving the required growth rates requires attention to detail across a range of areas, including colostrum quality, health, nutrition and housing, and the AHDB is providing a useful calf rearing resource pack in support of the initiative.

Those attending the Calf-to-Calving workshops are being challenged to monitor 10 calves of their own, and then share the results anonymously via AHDB with fellow farmers. A common question put to Andy Dodd is how best to monitor growth rates?

"Weigh bands are a good start for calves from

birth to weaning," he says. "Although not exact, they do give us a guide to growth from one week to the next as long as the same person does the task each time. However, with practicality and personal safety in mind, the time comes quickly when calves outgrow this method."

From this point on, there is clearly a need for some kind of handling and weighing system. The Allflex UK Group have supported the project by providing TruTest weighing equipment for the workshop sessions. Andy Dodd reports that the importance of accurate weighing becomes very obvious very early on during the discussions and most of the participating farms have invested (or are in the process of investing) in this equipment as a result of seeing the improvements that are possible. Otherwise, he asks, on what basis can you make evidence-based decisions that will improve calf health, survival and growth rates?

Although calves being watched in this project are dairy heifers, the principles apply equally to bulls, dairy-beef-crosses and weaned suckler calves.



Source AHDB

More information on Calf-To-Calving is available at www.dairy.ahdb.org.uk.



TAG TESTING TECHNOLOGY KEY IN BVD CONTROL

Maintaining a healthy herd is a priority for Wiltshire beef farmer Jeremy Cottle, firstly to maximise production efficiencies on the farm but equally importantly to maintain a reputation as a supplier of quality store cattle.

Working alongside his brother and father, Jeremy runs a 330-cow Limousin suckler herd, selling weaned calves largely through Frome market's autumn sale. He works proactively with his vet to maintain high herd health status, not least to stay on top of infectious diseases such as Bovine Viral Diarrhoea (BVD).

This particular challenge provides a prime example of how the Cottle's proactive approach to herd health combined with the use of the latest technology is providing the best possible assurances to the family and its customers.

"Six years ago we bought our annual replacements as in-calf heifers and sold their calves that autumn as usual," he explains. "The following April, a purchaser contacted me to say one of the calves had subsequently died, with a post mortem indicating it was a persistently infected BVD carrier, known as a PI.

"Of course, we reimbursed the farmer the full price paid for the calf, plus any vet's bills. As a supplier of high quality home-bred calves from pedigree sires, we rely on our good name and simply cannot afford bad publicity.

"The financial loss arising from the PI calf and concern that it could happen again prompted us to take a new proactive approach to BVD control. In consultation with our vet, we began vaccinating the cows, buying in vaccinated heifers only and have since introduced testing of all new born calves for BVD."

Within a week of birth, calves have an Allflex tissue sampling tag (TST) inserted in one ear, from which the resulting tissue notch is analysed for BVD status. Within a week, the farm receives an email to confirm the result of the test, which can be printed out and kept as a record of the animal's BVD-free status. According to Jeremy, TST tags are no different to apply than standard tags, and the farm has now tag and tested over 600 calves with no positives reported.

"In addition to confirming every calf's status, each individual test result is automatically uploaded to www.bvdcheck.co.uk providing traceability to purchasers who can easily check the BVD status of our cattle," he adds. "In addition to reassuring our customers, this gives us valuable peace of mind."

Helen Shepherd from Allflex explains that BVD can be present undetected in sub-clinically infected herds. "Considering the extensive cattle movements that take place, BVD-free herds are at significant risk of becoming infected without knowing it is too late.

"Clearly, BVD testing of calves enables PIs to be identified and removed at birth, and at relatively low cost, minimising the negative economic impact caused by disease associated losses."

With the BVD-Free England scheme now up and running, the Cottles are well-placed, having already voluntarily introduced a testing programme for their herd. BVD-Free England has set a target of eradicating BVD from the country by 2022, but with more taking the proactive



approach adopted by the Cottles – plus planned collaboration with Scotland, Northern Ireland and Wales - many believe BVD could be a thing of the past even sooner.

All weanlings sold by F C Cottle & Son will have been tested and recorded as BVD-free following tissue sample analysis shortly after birth. The Cottles use this technology alongside a full herd vaccination programme.

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The Allflex UK Group includes the Cox and Ritchey, Allflex Pro, Fearing, Ritchey ID and SCR businesses