

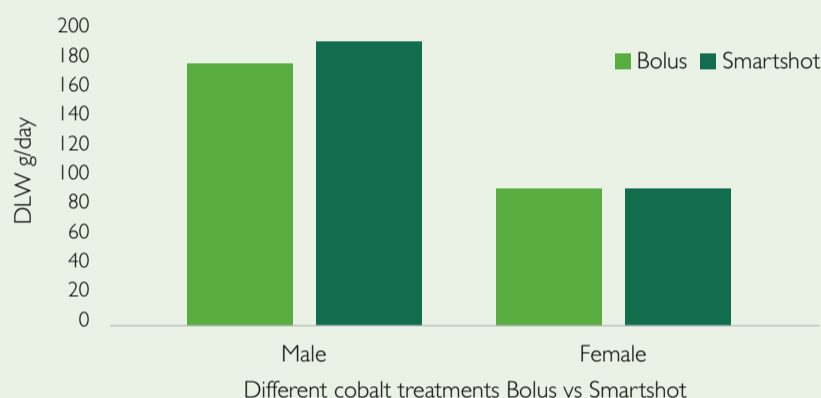
Demonstration Network

**Comparing different methods of cobalt supplementation in lambs**

Testing at Aberbrandyddu demonstration site had identified cobalt deficiency in the lambs, and a project was developed to compare using an injection of cobalt (Smartshot) to a bolus by monitoring the daily liveweight gain (DLWG) of the lambs following the treatments.

Gender	Number of lambs	Bolus group Av Daily Liveweight Gain (DLWG) in g	Number of lambs	Smartshot group DLWG in g
Male	150	180	127	190
Female	127	90	155	90
<b>Costs/lamb £</b>	<b>£0.50/lamb</b>		<b>£0.75/lamb</b>	

Comparison of Daily Liveweight Gain (g/day) of a randomised lamb cobalt trail over 2 months



The results show no difference in performance, and so the treatment of choice comes down to:

Key outputs from the project:

-  Cost
-  Ease of administering
-  Frequency of repeat treatments 

**Project Introduction: Optimising ewe lamb conception rates**

A project focusing on optimising conception rates in ewe lambs will begin shortly at a new Farming Connect demonstration site at Halghton Hall Farm, Wrexham. The aim of the project is to discover the optimum conception weight and condition for ewe lambs. The project also aims to identify the most sustainable scanning percentage for ewe lambs as they mother for the first time, before being introduced into the main flock.

Following the results of the baseline study which was produced for the sheep enterprise at Halghton Hall, one of the key performance indicators for the project will be to increase the conception rates of ewe lambs from 60% to +90% over a period of three years.

Knowledge Exchange Hub



A technical article titled 'Optimising the dairy cow diet for improved health' was published in November. It outlines how the dairy cow's requirements differ throughout her production cycle and how meeting these requirements are essential for her health and productivity.

**Measuring heifer growth rates on a rotational grazing system**

This project at Llys Dinmael demonstration site is looking at the best way to manage heifers on a rotational grazing system to optimise growth rates and grass utilisation. Llys Dinmael is an upland sheep farm with an excellent record of grassland management. They have purchased 20 Holstein-friesian heifers at 4 weeks of age and will rear them and sell as freshly calved heifers at 24-28 months of age. Grazing will take place alongside the existing sheep rotational grazing systems, and during their first winter they will be out-wintered on fodder beet and big bale silage.

Between July and October 2019, grazing was achieved on a two-day shift rotational grazing system with covers starting at 2500-2700kg/ha and grazed to 1500kg/ha on exiting the field. They then moved to strip grazing fodder beet behind an electric fence with big bale silage.

At the end of November, the average DLWG was 0.89kg/day and this was achieved from 6kg/head/day of fodder beet and big bale silage.

Regular monitoring of the heifers will continue to ensure target growth rates are achieved over the winter. Decisions on bulling dates will be made depending on growth rates and preferred dates for calving down.

**Iceberg diseases in sheep**

The main aim of the project at College Farm was to fully understand the true health status of the flock, to identify any diseases present, focusing specifically on iceberg diseases. The project was able to identify what diseases were present and develop effective control and prevention measures in order to tackle the problem.

Blood samples were taken from a total of 18 cull ewes that were being sold because of poor condition and were tested for Johne's disease, Caseous Lymphadenitis, Border disease and Maedi Visna. The results came back negative for all these diseases. A mob worm egg count and coproantigen testing for fluke were also carried out, all of which came back negative.

Four post mortems were carried out throughout the year on ewes that died of unexplained and sudden deaths. From these four post mortems, tumour lesions were found in the lungs of two of the ewes, which was confirmed by histology to be OPA (Ovine Pulmonary Adenocarcinoma), or Jaagsiekte as it's otherwise known. In both cases, the cause of death was pneumonia, but as a secondary infection to OPA.

Following the results, the flock health plan was reviewed and adjusted to coincide with the findings of the project. Carriers were immediately culled to maintain the health and productivity of the flock. In future, the flock at College Farm will be regularly screened for OPA.

Key outputs from the project:

- Highlights the importance of minimising disease risk
- Promotes the importance of health planning in sheep flocks
- Regular health screening is beneficial to maintain flock performance

**Management Exchange**

**Gary Yeomans's Management Exchange, September 2019**

**Topic:** Improved breeding techniques in dairy goats including the use of artificial insemination

**Country:** France

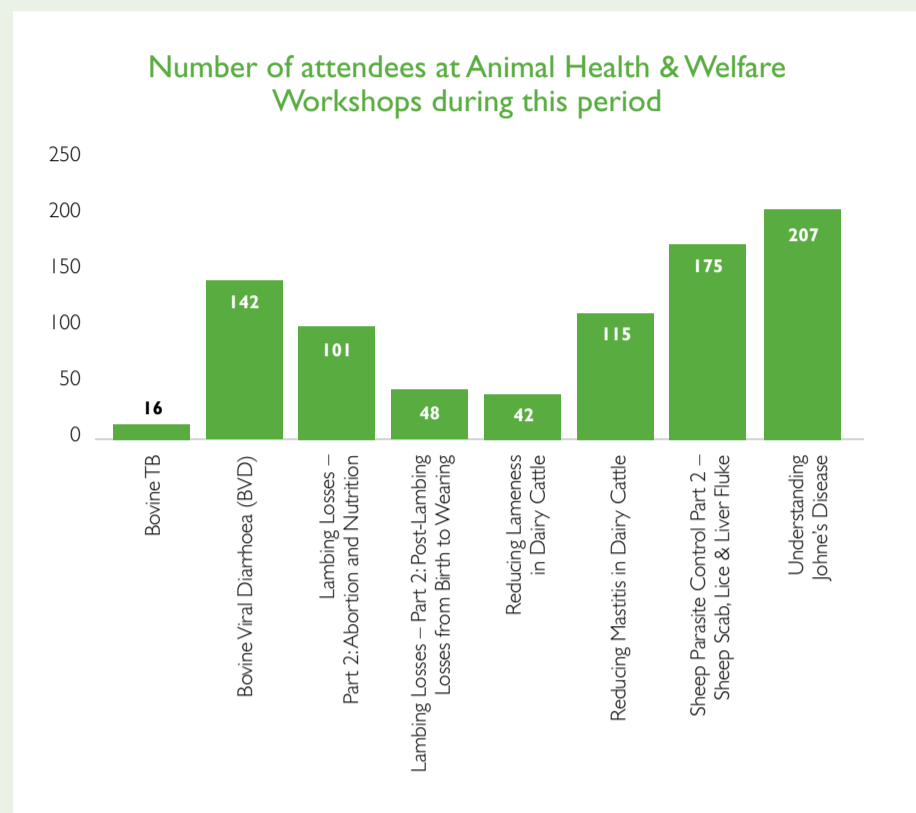


During September, Gary travelled to France to complete his exchange. Gary visited the headquarters of Capagès, a union of cooperative goat breeders, which provided him with a better understanding of how artificial insemination (AI) can assist with improving the performance of dairy goat herds. Using the French AI techniques, Gary has managed to increase the success rate of his herd from 38% (using a local vet) to 48%. He encourages other goat farmers in Wales to embrace the concept of AI within their herds to gain several benefits.

## Animal Health & Welfare Workshops

The graph below shows the number of attendees per module for delivered workshops up until the end of November 2019, with Bovine TB being one of the newest modules to be added to the delivery portal.

There is a peak in workshop delivery from October onwards, which is primarily due to the seasonal sheep courses including Lambing Losses and Parasite Control modules, as well as BVD, Johne's and Mastitis also proving to be popular choices.



## Discussion Groups

### Understanding & Interpreting Genomics Data in Dairy Cattle

Richard Millar, the Genomics Business Manager from NMR, was guest speaker at the Gwent Levels Dairy Discussion Group. The objectives of the meeting were:

- Accessing Genomics Results and utilising analysis tools to aid and interpret data
- Why Genomics is a key tool which helps to unlock potential within the herd.

Richard introduced the members to a Genomics analysis tool and emphasised the importance of using such tools to help make breeding decisions.

### Group Summary Results

Group Summary Results were displayed and discussed in terms of £PLI, Milk (Kg), Fat (Kg), Protein (Kg), Fat (%), Protein (%), Lifespan, SCC and Fertility Index.

Maximum, Average and Mix values for each category were reviewed.

### Importance of Genomics

Genetics enables accurate breed selection choice and reduces the % of animals incorrectly chosen for breeding based on PA (Parent Average) and also helps identify animals that are suitable for breeding that otherwise would not have been chosen by PA.

Richard concluded with a summary of genomic advantages.

- Genomics is a highly reliable breeding selection tool
- Identification of the ones NOT to breed is the key to rapid progress
- Enhanced strategy of the breeders completes the optimal breeding strategy
- £PLI and type merit aggregate scores
- Full production PTA's at Kg and Compositional % level
- Key profitability traits including fertility, lifespan, SCC and Sire ID
- Full Linear assessment equivalent
- A range of recessive genetic disorder results
- TB Advantage score – could be a significantly important tool in the future
- Fewer purebred bull calves and increased calf values.

## EIP

### Assessing the potential of genomic testing dairy heifers to increase genetic gains and financial returns

- 432 heifers have been genomically tested across the nine project farms.
- The results, so far, show that 46 animals (Table 1) would have been incorrectly bred to dairy if using the standard parent average £PLI figure because of over-estimating their actual £PLI value.
- On a percentage basis, 73.5% of animals would be correctly bred, 5.2% incorrectly bred to beef and 21.3% incorrectly bred to dairy using £PLI value.
- The decision to invest in genomic testing means that breeding decisions can be made much more accurately and herd improvements won't be compromised by breeding the wrong animal.

Table 1. Hypothetical Breeding Scenarios

£PLI Origin/Scenario	Bred to Beef	Bred to Dairy
Parent Average £PLI	52	235
Genomic £PLI	98	189

### Advisory Service

Number of business who have received support through the Livestock Categories of the Advisory Service during this period.



**17 individuals received one-to-one support through the Livestock Categories of the Advisory Service during this period.**



**24 groups received support through the Livestock Categories of the Advisory Service during this period.**

Feedback from businesses regarding delivery of this advice:

*"The advice helped us to feed cows correctly and thus improving cow fertility and increasing farm profits."*

## E-learning

Examples of the e-learning courses completed during this period include:

JOHNE'S DISEASE IN SHEEP



CALF SCOUR



SHEEP LAMENESS



POULTRY PARASITES



Click [here](#) to visit the website.

## Training Courses

Course Name	Number completed during this period
Safe Use of Sheep Dip	17
Machine Sheep Shearing	16
Advanced Machine Sheep Shearing	11
Safe Use of Vet and Med	11
DIY AI	9