



Farming Connect Management Exchange

Name: Lottie Wilson

Destination: UK

Topic: Dairy Cattle Lameness

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1 Background

I'm an agriculture student currently doing my degree in the University of Nottingham having previously completed a diploma in agriculture at Hartpury College. At home, we are milking around 320 Holstein Friesian cows in an all year round calving semi-intensive system. While lameness does not blatantly cost our business too greatly, it is an issue that can always be improved which in turn will increase fertility, milk production, and longevity, while reducing antibiotic usage and cost of production.

The aim of my exchange was to gain a greater understanding of dairy cattle lameness and why it is such a large issue on farm despite the huge cost implication to businesses. As is often the case, research is being done to create solutions to some of the major issues such as lameness detection, ease of management, and trimming techniques. However, this is often not backed up with practical solutions that we can use on farm. My objective was to see some of this research being carried out and to ask questions about what changes I can make on farm to create solutions and benefit the business.

2 Itinerary

2.1 Trip 1: University of Liverpool – following George Oikonomou and his team

Day 1:

I first met with Beth Griffiths, a PhD student who is studying foot lesions; what causes them and how to prevent them. During her research she has studied 2353 cows. All of which she genotyped, and then lifted all 4 feet at 4 stages throughout their lactation when serums and samples were taken and tested to identify markers for potential foot lesions. Studying the four stages throughout the lactation proved the theory of the calving effect, during which the digital cushion (fat pad) is reduced due to an increase in hormones. In turn, this makes the cow more susceptible to sole ulcers and necrosis. In order to counteract this weakness; cow comfort and foot care is paramount. Ensuring enough bedding and space is available and limiting bullying and the risk of slipping. There is also a large risk in in calf heifers, due to the weakened digital cushion, the pedal bone position could be permanently altered causing lasting damage for the heifer. Therefore, giving dry cows and in calf



heifers the best available housing and as much space as possible will see a great return.

I then travelled to a local farm where vet students were carrying out housing tests and mobility scoring cows. The farm had greatly improved its lameness rates over recent years. In part due to the university's 'Cattle eye' project. This project uses AI to identify lameness in cows early enough to fix the problem and prevent further damage. As well as this they had installed an automatic footbath which has also had a positive impact on lameness and as been especially efficient at reducing digital dermatitis. During milking time, another PhD student, Alkis Anagnostopoulos, was scoring the cows back legs for digi. He did this using a spatula with a small mirror glued to it to allow him to clearly see under the cows heel. This was part of his trial looking into the best management for digi and how it presents at different stages.

Day 2:

I shadowed Alkis at another farm where he was working on a digi based project. During the day we were lifting heifers back feet to score and treat their digi. Despite the huge presence of digi on many farms and the immense cost to businesses, there is still very little known about the disease. Such as why is it predominantly seen on the back feet? Does the infection begin internally or externally? And perhaps most importantly, what is the best way to treat it? These are all questions that Alkis is studying in this project and while there are still no definite answers, it was great to talk about the possibilities and to hear about the solutions that may be coming into play in the coming years.

2.2 Trip Two: Sara Pederson

Days 1&2

I spent two days working with Sara on her PhD research looking into trimming techniques for heifers. Heifers were mobility scored and then trimmed either with a wide model or the Dutch method, they are then followed through to observe the differences throughout their life. Having never seen the wide model used previously, it was very interesting to hear of the benefits and to see it being done and I look forward to the results. With which I would be able to implement a change on my own farm, changing trimming model and looking more at heifers' feet if a benefit is identified as projected.

Day 3

I spent the day with a farmer led discussion group that Sara has set up. The idea of the group is for farmers to visit each other's farms and discuss their own lameness statistics and problems and give one another advice and bounce off each other. Despite there being a vet present, Sara is just there to ask some questions while supplying very limited input. I was amazed to see how well the group worked and how open and willing to help one another there were. I The day made me realise how much we as farmers can benefit from each other when given the chance.

3 Next Steps

Following my exchange programme, I have begun to plan changes for the future on the farm including regularly foot bathing dry cows and actively looking for and treating digital dermatitis as early as possible. Additionally, having seen what a huge impact foot trimming techniques can have; I am doing

my herdsman foot trimming course and mobility scoring courses at the end of the month with the intention to do further foot trimming courses in the near future.

- Knowledge
- Training
- Investment
- Time
- Improvement

4 Key Messages to the industry

1. **Record and measure herd lameness levels and causes.** Knowing the herd statistics can allow you to identify and target areas for improvement sooner and results can be seen and measured, hopefully proving time and money is being used in the right ways.
2. **Utilise all resources and personnel available.** Farm staff, foot trimmers, vets, consultants, and fellow farmers are all able to help with solutions to problems with lameness and using the entire team will help ensure the best results for the cows and the business.
3. **Pay attention to the 'Calving Effect'.** With dry cows and in calf heifers often either turned out or in a shed away from the milking set up, foot bathing and lameness scoring is often neglected for the dry period.
4. **If milking in a parlour; use it.** Standing within 6 inches of a cows back feet twice daily should allow you to identify many problems, especially digi, early. Use this to the advantage and take the time to look and treat accordingly.
5. **Appreciate the importance of foot health and invest accordingly.** Lameness can cost the business thousands of pounds very quickly. Identify the areas that are causing issues and invest early.



