



news from advanced nutrition

Summer 2016



Summer is here again!

As I started writing this I received a message saying a processor has finally lifted their milk price. Is there hope at last? You'd like to think so but, this period of low milk price just goes to show how volatile the industry can be and, that we can't just sit back and try to ride the storm.

As some of you know, I have been 'the student' for the year, a title which will have been passed on by the time you read this. As the third Harper Adams University placement student to come to Advanced Nutrition it was a challenge for me to meet the team's expectations, as well as to try to learn as much technical detail about a dairy consultancy role. Coming from a mixed farm background in Suffolk with 160 dairy cows, dairy beef finishers and arable, I was used to the basics of practical farming. However, for me, the benefit of working for Advanced Nutrition, was more about seeing new ideas, concepts and systems to gain a better understanding of the dairy industry in the UK.

I've seen such a variety of farms in terms of location, system, climate, breeds and so on. Most of these variables are either impossible or very difficult to change but one thing which can, and should always be kept to a high standard, is animal health.

Advanced Nutrition continually works to meet the needs of farmers as they look to improve efficiency whilst safe-guarding animal health. One job I carried out alongside the team was the Free Farm Evaluation. The aim was to look at every aspect on farm and, identify the main bottlenecks.



90% of the time issues on farm came down to animal health. Farms which have been successful during this volatile period have been the ones to focus more on cow health. They haven't cut corners on dry cows, quality forage, protocols or anything that will affect them long term.

I have thoroughly enjoyed my time with Advanced Nutrition, so much so that I have been fortunate enough to get an offer to join the team after I graduate next year, which I have gratefully accepted. I would like to thank all of you for making this a brilliant year for me as 'the student' and look forward to meeting some of you again next September when I start my new role.

Joe Adams "The Student", Harper Adams

Also in this issue...



New Starters



Cows Never Lie!



World Jersey Tour



advanced nutrition
moving farms forward

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Welcome to Our New Starters

In May 2016, Advanced Nutrition grew! We welcomed three new recruits to the team; Calum Smith, Sean Kennedy and Caitlin Palmer. Now that they have found their feet, let's put some faces to the names.

Caitlin Palmer Ruminant Technical Specialist

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Caitlin graduated from the University of Glasgow with a 1st Class BSc (Hons) in Veterinary Bioscience.

During her studies, Caitlin learnt about animal nutrition, production and management. For her dissertation she researched the effect of 4 different products on the incidence of SARA to determine their usefulness when fed alongside a high starch diet. Modules in business have also provided Caitlin with the skills to help support producers look at their farm business from all angles.

Caitlin's practical farming experience includes dairy farming as well as looking after the sheep on her family's small holding in Dumfries & Galloway.

"I'm looking forward to building strong working relationships on farm, taking a whole farm approach to animal nutrition, health and production. A healthier animal is a more profitable animal. I want to ensure that the farms I work with will be in the best position for when prices recover."

Sean Kennedy Ruminant Specialist

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Sean's love of farming started as he grew up on his family's 500 acre pedigree beef and sheep farm near Ayr.

He later developed his own flock of Texel sheep and herd of British Blonde cattle. He continued to work on his family's farm whilst studying Agriculture at Barony Agricultural College which is where Sean developed his livestock husbandry skills and knowledge of crop & grassland production.

On leaving Agricultural College, Sean began working within the dairy industry where he was responsible for milking, rearing calves and day-to-day management. Sean later travelled to New Zealand for the silage season 2015-2016, where he worked as a contractor for Fonterra Farmers. He got to see New Zealand dairy operations and grazing systems first hand.

Some of Sean's greatest achievements have been in the show ring having won the 2010 Royal Highland Show with one of his home bred British Blonde heifers, the 2014 Scottish Winter Fair with a Charolais X bullock, and several other national titles.

"I'm passionate about everything agriculture and excited for the challenge of helping producers across Ayrshire maximise the potential of their farm businesses."

Calum Smith Ruminant Specialist

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Calum is from a successful pedigree beef and, sheep farming background.

He's helped in the preparation and the showing of livestock at regional and national level where, he's won Champion at both the Royal Highland and Yorkshire shows.

He attended Barony Agricultural College where he obtained his National Certificate in Agriculture. His agricultural capabilities developed further when he was selected for the Tesco Future Farming Foundation Scholarship. This experience has proved invaluable for Calum. Not only is he applying the skills he developed to challenge every aspect of his own farm business but he also hopes to use this insight when working with other producers whether dairy, beef or sheep.

Before joining Advanced Nutrition, Calum was a Heatime Specialist for Semex UK for three years.

"My experience prior to joining the Advanced Nutrition team really compliments their whole farm approach. I look forward to working closely with producers to help drive efficiency on farm and to lower production costs without compromising animal health. Maximising home-grown forage production will be essential."

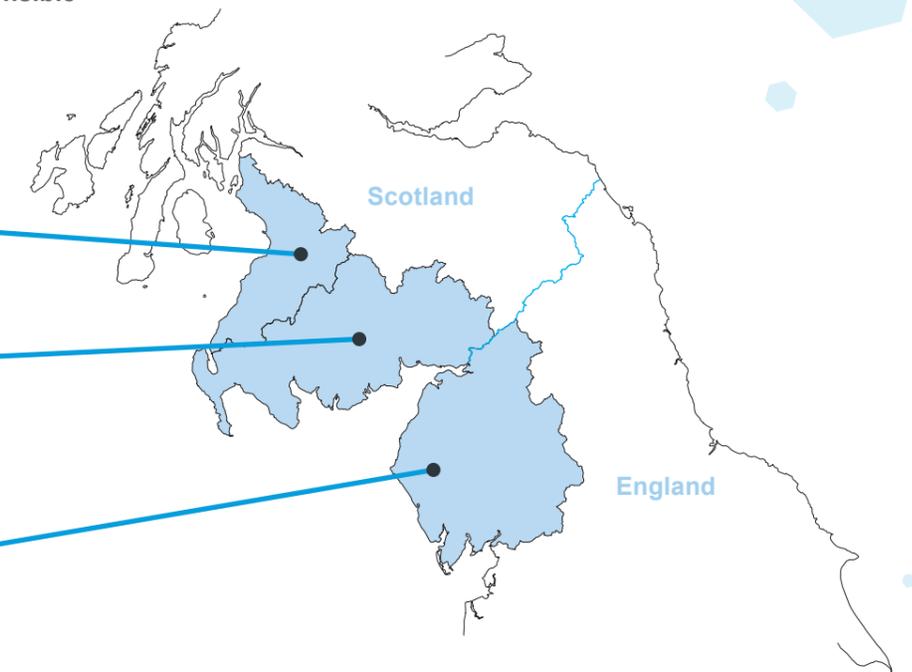
Areas of operation

Each new recruit will be responsible for a different area

Sean Kennedy
Ayrshire

Calum Smith
Dumfries & Galloway
and Wigtownshire

Caitlin Palmer
West Cumbria



Cows never lie!

With summer here, Richard Bainbridge shares his experience with cow signals in order to keep our cows healthy and productive.

There's always a number of cows you'll remember for their quirky or mischievous nature but the one thing cows never do is lie! Cows can be said to be the most honest beings on our farms, as their behaviour and what is ultimately collected in the bulk tank, can tell us.

Looking at cow signals has not only helped me manage my own pedigree herd but plays an important role in the work I do with my clients. As I often tell my clients to look afresh at their cows, I too have done the same by attending a four day cow signals course recently in Holland. It's made me focus on what can be achieved on farm to help cow flow and comfort without necessarily adding cost.

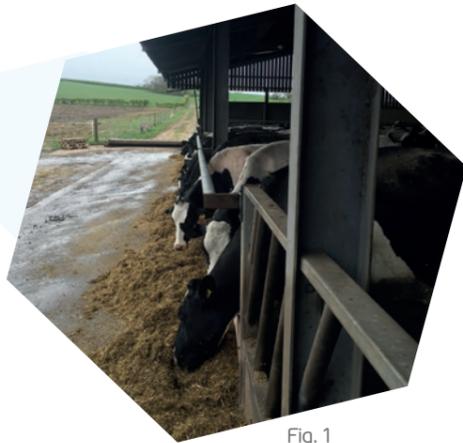


Fig. 1

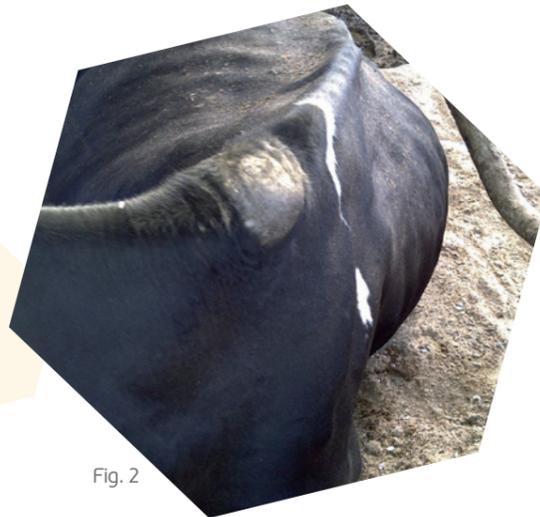


Fig. 2

Feeding

I have recently begun working with Sam Dickinson at Aberdeen Farm. Fig. 1 shows the cows in the close up dry period feeding through a standard diagonal feed fence. Having observed the cows I felt intakes were being restricted and more timid cows were being blocked from the feed rail. To ensure that these cows had the best start in their lactation, it was agreed that the feed rail would be replaced with a single bar, set 6 inches further forward, which I knew would help the cows to consume more of their dry cow diet. It was important to set the feed rail at the correct height, as we didn't want to see cows rubbing their necks as they push to get their feed, an example of which can be seen in Fig. 2.

Sam saw a difference in his cows after the feed rail was replaced, ***"I could see immediately that the dry cows were a lot happier at the feed fence. Their intakes jumped up by 1.5kg/DM! Some of the cows were also moved out of this group to reduce pressure on space. The cows are looking fuller and more content, which I believe is helping them calve down better"***. There was minimal cost involved in switching the feed rails, but the change in the cows have certainly been evident.

Cow Comfort

For cows housed in stalls, we shouldn't see cows standing in cubicles any longer than a minute on entering. If I see that, I often question why? It frequently comes down to comfort and or cubicle dimensions. During the course we looked at a good substitute to traditional sand which can make manure handling difficult - a mix of straw with limestone which can be used to create a comfy, healthy deep bed. The limestone helps reduce mastitis microbes. This is something that may work for some UK dairy producers and I would be happy to discuss further.



The Great British Summer!

The weather plays an important part at this time of year, often causing headaches as to when we should cut for silage, but it can equally pose problems for our cows too that we need to be aware of.

Heat Stress

Even on days which are overcast with drizzly rain or are particularly humid, cows can experience heat stress when temperatures reach over 17-18°C. Signs to look out for are cows which are breathing heavily or panting. When we start seeing these signs, we know intakes will be down as will milk yield. As outside temperatures increase over 21°C, cows are at risk of rumen acidosis and ketosis as there is less rumen buffering with decreased saliva to the gut and loss of bicarbonate due to panting.

On farms I work with, I often make slight adjustments to the diet. Whenever feed intake decreases due to heat stress, nutrient concentration should increase to maintain adequate intake of all required nutrients. It's important to feed higher quality forages as they can be digested faster so less heat is produced by fermentation in the rumen.

On a practical level, there are many things that we can do to make our cows more comfortable. If possible, try to increase ventilation by removing Yorkshire boarding or perhaps install fans for a long-term solution if natural ventilation is limited. Mist or spray your cows with water in the collecting yard as another effective way of cooling them down.

Water Accessibility

Water makes up a lot of the content of milk so it is important that this is not limited. A 45+ litre cow will require over 150 litres of water per day, 60% of which she will consume following milking so the quicker she can have access to clean water the better! A cow should be able to drink 15 litres in 45 seconds and 10% of the herd should be able to drink at any one time.

When walking the cows check the water is clean, and that water replenishes quickly. Try to ensure troughs are accessible as cows return from the parlour and that there is plenty of space.



Bringing Cows in From the Pasture

With sustained low milk price, some producers are grazing cows for longer or even for the first time. When cows walk calmly they walk with their heads down so that they can see where they are placing their feet. Rushing cows in from pasture can increase prevalence of lameness and also disrupt the order of rank within the cows which can cause bullying, nervousness and upset.

Principally, what I learnt from this course is the importance of communication on farm between farmers, farm staff and us as ruminant specialists. By looking at the cows collectively we can discuss what is being presented and implement changes. If the whole team familiarises themselves with how the main group of cows are behaving then it is easier to pick out the cows that look out of place or that are acting differently. It is at this point that it is often easier to identify what the issue is and how to resolve it.



Please contact me for further information.

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On a high from the World Jersey Tour



Mark Gorst, feeds back from the World Jersey Tour at The High Farm, Carnforth.

In June, the World Jersey Cattle Bureau toured Ireland, the UK and the home of the Jersey cow, Jersey Island. The tour was not only a celebration of the Jersey cow but, a chance to mark 150 years of the Jersey Herd Book, the oldest Dairy Herd Book in the world. Farmers from across the Americas, Australasia and, Europe came together to visit some of the best Jersey herds in the UK & Ireland.

On Wednesday 15th June, the tour visited the Pye family to view their impressive Bayview Jersey herd. The herd based near Carnforth, Lancashire was established at the High Farm in 2004 having replaced their pedigree Holstein herd. Milk is sold to Dewlay Cheesemakers of Garstang who specialise in Lancashire cheese.

Having been warmly welcomed to join the Pye family as they hosted the tour, it was an opportunity to demonstrate to the visitors, the areas in which Advanced Nutrition are working with Geoff, Deb, Matthew and Sarah to help them move their farm forward.

Dry Cows

The dry cows at the High Farm are housed all year round on straw yards, where they are fed a TMR diet of grass silage and wheat straw.

It's well documented that Jerseys are more susceptible to metabolic disorders than Holsteins at calving. Prior to us getting involved Matthew Pye explains *"We ended up treating every cow with calcium before, during and, after calving. Once the cows had calved they were slow to get going and would spend up to a week post calving in the straw pen before being ready to re-join the herd"*.

We introduced a new dry cow management system in 2013 and added a supplement called X-Zelit, to the diet two weeks prior to calving. X-Zelit stimulates the cow's own hormonal system to allow better control of calcium throughout the transition period. The supplement is fed as DC X-Zel, a wheat and soya based unmineralised nut.

"DC X-Zel has definitely reduced the worry that surrounded calving with only two milk fever cases since we started using it. The cows recover much quicker and are able to return to the main milking group within six hours of calving" **Matthew Pye**

The table below shows how X-Zelit hasn't been just a milk fever preventative, its benefits stretch far wider.



	Mar-2012	Mar-2013	Mar-2014	Mar-2015	Mar-2016
Caving to 1st Service days	84	81	79	76	76
Days to Conception	112	110	103	105	104
Lactation Period	302	289	293	275	272
Caving Index	394	385	386	380	382

Forage

With the milking herd housed all year round, the production of home-grown, quality forage is a priority. In 2015, 25 acres were replaced as part of the reseeding plan. The VersaMax Meat & Milk mixture was chosen as the ley is suitable for a wide variety of soils and will tolerate the annual rainfall in the Lune Valley (65-70 inches). This persistent dual purpose mixture produces an excellent quantity and quality grass ley. It's designed to last for 3 - 5 years and can be overseeded in the final year to extend its life further.

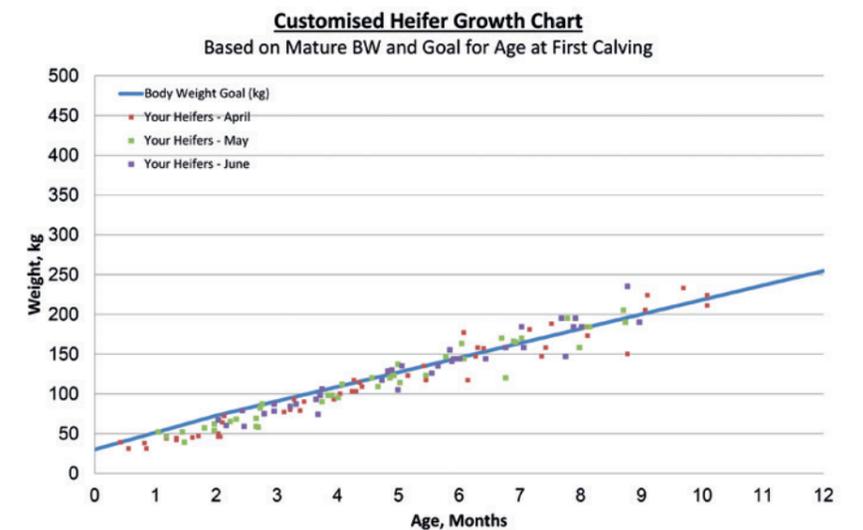
The future lifeblood

I was asked to be involved in the development of the youngstock in April. Following a thorough assessment of the heifers, the Advanced Heifer Rearing Program was tailored to the Pye' requirements and implemented. We are currently weighing heifers on a monthly basis up to 12 months old. The aim of this carefully monitored system is to ensure the heifers grow adequately and hit set targets to maintain the stature of the herd. The Bayview heifers are targeted to calve at 24 months and weigh just over 400kg. To achieve this, the heifers need to grow 0.50kg/day from birth to calving. Their current growth rate is 0.70kg/day. The chart shows the last 3 months weights against target for the heifers at The High.

Since we introduced the program in April, the diet has been simplified and cost removed while growth rates have increased.

The average daily saving per animal is approximately 14p.

Over the full growing period this equates to £100 per head.



Heifer Details

Age	4 months	8 months	12 months	14 months
Weight	100	180	260	260
Growth Rate	0.70	0.70	0.70	0.70

Financial Details

COPF (pence/kg LWG)	67	69	40	41
COAF (pence/kg LWG)	87	104	111	116
Diet Cost (£/d)	0.61	0.73	0.78	0.81

Amid difficulties within the dairy sector globally, there was great optimism and passion amongst the Jersey delegates at The High Farm. The day provided a fantastic opportunity to open up conversations on farming practice with farmers from across the world. The Bayview herd is a credit to the Pye family and all the hard work they put in.

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Provimi Refresh

Rehydrate your cows after calving



Depending on the breed, a cow will lose up to 90kg at calving. Around half of this weight is the calf, the remainder being water and essential nutrients.

Where the calf used to be is now a capacity in the abdomen, which needs to be filled by the rumen. But before and after calving, dry matter intakes (DMI) are low and poor feed and water intake can result in increased gas production in the rumen, omasum and abomasum. The accumulation of gas and the available space in the abdomen increases the risk of organs moving or twisting. The most common being a displaced abomasum (DA). Getting a cow standing, eating and drinking quickly after calving will help in filling the rumen early. Increasing her DMI intake post calving is a way of reducing the risk of a DA.

The metabolic demands for a lactating cow are roughly double that of the dry period, often meaning that her rumen and general metabolism are not geared up for the sudden increase in demand after calving. In the days following calving, the DMI will need to increase dramatically in order to prevent metabolic problems in the early part of her lactation. There are problems at calving other than energy and DMI, which will have an impact on performance during lactation. Calcium is used by all mammals for sending nerve signals and for muscle contraction – a large amount is therefore used at calving. After calving the cow has dramatically increased calcium requirements for milk production, if the cow cannot source enough available calcium post-calving then other normal muscle activity will be compromised - possibly leading to milk fever.

Taking extra care of the cow after calving starts with the cow taking on water post-calving not only to quench her thirst but rehydrate and fill her rumen, all promoting DMI. Water is the forgotten nutrient and is crucial for all metabolic activity. A cow post-calving is extremely dehydrated and then needs to produce milk (**87% water!**). A lack of electrolytes will make it very difficult to utilise much of the water that the cow drinks, having a further negative impact on the start of lactation.

Provimi Refresh is a ready to use rehydration drink for cows directly after calving. Refresh contains the ideal balance of easily absorbed energy, essential electrolytes, highly available calcium and also LIFT to help liver function and Amaferm to help with rumen function. Dissolved in 15-20L water (30°C), it will quench the first thirst and fill the rumen for the optimal start to lactation. Refresh is available in 750gram (1 dose) sachets or in 18kg buckets.

Ask your Advanced Nutrition Ruminant Specialist for more details.

