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NEWSLETTER

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This Month:

A Healthy Transition (part 1)
GB Dairy Calf Strategy

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PREVENTION IN PRACTICE

After an April that was the frostiest on record, we have now had a May that was the wettest on record, as well as being a good deal colder than an average May might be as well. I'm usually in shorts full-time by now, but not this year! Many of you are still waiting to get your first cut done once everything dries out a bit - and there are a lot of clamps out there that need filling again after a later turnout plus some required buffer feeding earlier on.

This last week Gilly and I were asked to do a talk for our boys' Cubs group about being vets, and how it contributes to our community. It made me reflect on how fortunate I feel to work in this practice, and more particularly with the farm clients that I regularly see and work alongside. Showing the Cubs the ways we examine, diagnose, treat and sometimes have to operate on our patients was perhaps the more exciting bit for them to see pictures and videos of, and to be honest might often feel like the more exciting parts of our day to day job. But I am certain that our most valuable contributions as part of the farm team is working to prevent the problems in the first place.

This comes through regular monitoring (whether of production, diseases, fertility or anything else), and herd health discussions and plans that seek to improve herd health and production based on what is being monitored.

And this is also the area of my job that I can continue to learn and develop and 'practice' the most. I'm probably not going to get an awful lot better at doing an LDA, trimming a sole ulcer, or treating a calf with pneumonia (or TB testing!). But I will always have a lot to learn (often from farmers!) about how to better advise and effectively change the way a herd is fed, housed, transitioned, vaccinated or managed in a host of other ways so I have to operate on fewer DAs, trim less feet and jab fewer calves (and, God-willing, many years down the line, do fewer TB tests!).

So, now we can go and sit inside a pub to get out of the rain and cold, here's to the future of preventative farm management and vet practice.

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IN FOCUS

A HEALTHY TRANSITION

It feels like the weather is struggling to transition to spring this year, but do you sometimes feel like a similar story haunts your cows' "transition"?!

We are known to harp on about transitioning cows effectively, but that is for excellent reason. More farms are realising how much potential comes from their cows if they manage this crucial period well. Achieving this relies on getting a short list of critical points spot on. For this article I'll focus on some of the things you need to get right in the *pre-fresh* side of the transition.

CRITICAL QUESTION ONE:

What % of their body weight do your dry cows eat in forage NDF (fibre)?

Farms that fail to get cows to eat >0.85% of their body weight of forage NDF daily during the dry period are more prone to post-calving metabolic problems and displaced abomasums. This is a lot of fibre! A 750kg dry cow needs a minimum of 6.5kg DM forage NDF every day. So if they eat 11kg DM each day, at least 60% of that needs to be NDF! If those same pre-fresh cows would eat 14kg DM each day, then only 45% of the diet needs to be NDF to hit those numbers. Intakes are therefore key, and we should always be striving to increase them, especially in the pre-fresh pen.

Fig 1: feed space can easily be a limiting factor when it comes to transition intakes

So why and how should we increase intakes?

In order for dry cows to calve at a target body condition score of 3.25, the energy content of the diet must be restricted for some or all of the dry period. To achieve that aim while also hitting NDF targets, we have to allow cows to eat as much as possible.

To do this, dry cows need to have well presented palatable feed in front of them 24/7, refreshed daily. ***Feed space*** should always be a minimum 75cm (90cm is better!) per dry cow to limit bullying and displacement behaviour. Remember this is FEED space, so if you don't feed to the ends of the barrier or have water troughs that are in line with the barrier, it doesn't count! Work from the University of British Columbia has shown that social competition at the feed bunk in the 21 days before calving directly impacts

metritis incidence[1]. In the study, they overstocked the pens to 45cm of space per cow and saw large increases in the percentage infected post-calving.

Social competition can also occur every time new cows are moved into a pen. New dry cows will drop dry matter intake (DMI) by 10% after a group move, and they will displace existing cows from the feed bunk twice as often as established cows do. Aim to move cows no more frequently than once a week. Moving cows close to calving will also impact DMI if timed poorly. Cows should not be moved between day 16 and day 2 pre-calving.

Intakes are also highly dependent on the ***TMR presentation***. Particle size should be as uniform and well distributed as possible. If you use chopped straw in your diets, it should be pre-processed to ensure the majority of particles are 2-5cm long in the TMR. Why? Particles longer than 5cm encourage cows to sort through the diet to exclude them, filtering for the high energy, low NDF ingredients. This is problematic as those that get to the bunk first and spend time sorting will eat a low NDF, high energy diet and end up overfat at calving. The remainder of the diet is then made up of long straw that is unpalatable and submissive cows will refuse, reducing intakes and also failing to reach NDF targets.

The dry matter content of dry diets should be as closely controlled as possible and ideally monitored during different weather and time points after feeding to see how it changes. Cows will struggle with intakes if the diet is too dry (>50% DM) and sorting will again worsen. Water can be added to the mix to bring this down. The amount you need to add will vary constantly and is worth spending some time dialing in. Lastly, provide enough food! Target refusals of 10% and make sure dry cows do not go hungry.

What about when they are not eating?

So, we like dry cows to be eating, but driving that behaviour is the triangle of drinking, lying and rumination! Water intake is crucial in order to allow the rumen to function and process all of that NDF, and the better they process it the faster they want to eat more of it. Water should be clean and palatable, with at least 10cm per cow of access space. Rumination behaviour is also key in allowing a dry cow to process feed and therefore drive her hunger for more. Recent work shows that cows that have rumination activity below 600 minutes per day in the week before calving have higher risk of problems after calving. Also cows that drop >45 mins of rumination time from two weeks before calving to one week are higher risk.[2] With more farms using rumination collars, this is easy to monitor and adjust management accordingly. To increase rumination activity, social competition must be low, beds must be comfortable and correctly sized to maximise lying behavior. If using straw/sand yards ensure there is 1.25m^2 for every 1000L. (A 12000L cow needs 15m^2 of lying space, passageways and troughs do not count!)[3]

Fig 2: an over-stocked dry cow yard will impact not only available feed (and water) space, but also the ability to lie down and ruminate effectively.

CRITICAL QUESTION TWO:

Do you manage calcium balance at calving effectively?

Calcium is very important when looking at potential for milk fever, retained placenta and other early lactation issues. Calcium intakes should be either very high (>200g) or very low (<80g), between these figures the risk for clinical milk fever increases 5x. Along with calcium, DCAD (Dietary cation anion balance) can be used to evaluate milk fever risk. Diets that are lower than -100meq/kg carry less risk of milk fever. Monitor this effectively by using urine pH test strips and targeting a urine pH of 6 in close up dry cows.

Good calcium management will still often leave fresh cows in a calcium deficit post-calving for 24-48 hours (subclinical hypocalcemia), but this can be overcome using oral calcium boluses at the point of calving. Avoid using sub-cut bottles of calcium in clinically normal cows - this has been shown to INCREASE the chance of causing subclinical hypocalcemia in some cases.

CRITICAL QUESTION THREE:

Do you control body condition effectively across the dry period?

Cows should NEVER lose body condition across a dry period - it will fill their liver with fat and predispose them to ketosis post-calving. They should either MAINTAIN body condition or increase slightly with an upper limit of no more than 0.25 of a score. Cows should be dried off at a 2.75-3.25 BCS and then be a 3-3.25 at calving with less than 10% outside by 0.25 of a score. LOSING weight indicates cows are not achieving adequate energy requirements while dry. GAINING excessive weight indicates cows are being fed a ration that is too energy dense and will need to be diluted.

IN SUMMARY

If you can achieve good intakes of forage NDF, minimise stress, maintain body condition and manage calcium balance in pre-fresh cows you are halfway towards an effective transition!

Keep an eye out for Part 2 which will focus on some of the critical points for managing post-fresh cows effectively.

REFERENCES

1 Huzzey 2010 Prepartum Behavior and Dry Matter Intake Identify Dairy Cows at Risk for Metritis Animal Welfare Program, Faculty of Land and Food Systems, University of British Columbia, 2357 Main Mall, Vancouver, British Columbia, V6T 1Z4, Canada

2 Brandstetter 2019 Chewing and Drinking Activity during Transition Period and Lactation in Dairy Cows Fed Partial Mixed Rations Institute of Animal Nutrition and Functional Plant Compounds, University of Veterinary Medicine Vienna, 1210 Vienna, Austria

3 https://ahdb.org.uk/knowledge-library/dry-cow-housing

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SPOTLIGHT

GB DAIRY CALF STRATEGY 2020-2023: WHAT DOES IT MEAN FOR MY FARM?

The GB Dairy Calf Strategy is led by AHDB and the NFU, and their guide expresses the pride the UK dairy industry has in being a pioneer in cattle welfare, and maintaining those standards as a top priority. They say: "*The fate of dairy bull calves is not a secret; it is actually a key focus area within the industry. The rearing of bull calves on farm for the beef market remains high...There is still room for improvement and we will continue to challenge ourselves to keep progressing in these areas.*"

Approximately 30% of calves born in the dairy herd are heifers that join the milking herd. Ninety-five per cent of the remaining calves are expected to be reared for beef. There is a commitment to rearing all calves with care and eliminating the practice of euthanasia of calves by 2023.

What does this mean on farm?

From Autumn 2021 it will be a Red Tractor requirement for all dairy farms to have a written ***Breeding and Management Plan***. Red Tractor have a template for this available on their website, including links to other industry sites that can provide assistance.

We have now incorporated the Red Tractor Breeding Plan template into our Herd Health Plans and can help take you through some of the calculations involved and provide advice on calf housing if needed.

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The purpose of the breeding plan is to demonstrate that your farm has thought through the number of replacement heifers required each year and what breeding decisions have been made to ensure that the other calves born are economically attractive to potential beef buyers/rearers.

There are several tools that are helpful in providing figures for the breeding plan, one of which is the ***AHDB semen calculator***. This allows you to play around with the percentages of cows and heifers served to conventional, sexed and beef semen (or a bull) and how the calf numbers produced vary. This is a bit of a blunt instrument and we would advise carefully reviewing the numbers from this before making a decision but it is certainly useful for supplying the data for the Red Tractor Breeding plan.

Identifying which breeds of beef bulls are used is another requirement. Many of the breeding companies are working hard to identify specific beef bulls that, as well as being easy calving, produce desirable traits in offspring produced from dairy cows. A small step that can increase the marketability of these beef cross calves is to add in the sire's name when registering them on BCMS. Some supply chains require or prefer calves with a registered sire and abattoirs are constantly gathering data which is fed back into the bull proofs.

Another required figure is the space needed for 10 days worth of calves born. Although it is again a crude calcution as there are peaks and troughs within any calving pattern, the aim is to demonstrate that there is sufficient accommodation for all the calves on farm and that there is a contingency plan in place in case of a TB break down.

Ultimately one of the main aims of this strategy is that all calves born on farm receive the same care and attention, regardless of sex or breed. Factors such as colostrum management and environmental cleanliness can have a huge influence on calf health - but on many farms the best is saved for the heifers. Having a robust calf health plan in place not only ensures your replacement heifers get the best start in life but beef calves you sell become more attractive to buyers as they come to recognise calves from your farm have had the best start in life too.

For calf rearers?

Once the effects of this policy come into effect it is likely that there will be an increase in the number of quality beef cross calves coming from dairy farms. This could be a great opportunity for calf rearing enterprises. So what information should you be asking for from potential sellers?

Colostrum management – only buy calves which are known to receive 3-4L of good quality colostrum in the first 6 hours of life

The type of dairy cows in the herd - to understand the dam's influence on frame size and conformation

The health status of the herd - e.g. BVD, Johne's, IBR, TB, to understand the health risks associated with the calves you are purchasing

But what if I go down with TB?

Unfortunately, TB breakdowns are a part of farming in this part of the UK, and being under TB restrictions inevitably leads to more animals on farm than usual. This can cause particular issues for block calving herds. A key part of the calf strategy is to ensure that calf health and welfare is maintained whatever the circumstances, as overstocking could have negative consequences for calf health.

The organisations leading this strategy acknowledge that there are currently many challenges in getting animals into Approved Fattening Units (AFUs), and have pledged to work to improve this. Isolation units are utilised by some farms but these can throw up their own hurdles. Many farms manage to find the space to house the extra numbers on farm often utilising buildings not usually used (and perhaps not ideal) for livestock. Part of the breeding and management plan is about having a policy in place so if the worst does happen you know what you are going to do with the extra calves.

Full information about the GB Dairy Calf Strategy, a helpful webinar and many FAQs around the new requirements can be found on the AHDB website: www.ahdb.org.uk/gb-dairy-calf-strategy-2020-2023

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