



SARA in Dairy Cows.

The increasing milk yield and associated energy requirement of the modern dairy cow over recent years has led to challenges in achieving good nutritional management. Incorrect feeding of diets that are high in rapidly fermentable carbohydrates and low in fibre can lead to prolonged and repeated periods of abnormally low rumen pH which is referred to as Subacute Ruminal Acidosis (SARA).

Rumen pH fluctuates during any 24 hour period and is determined by the dynamic balance between the intake of fermentable carbohydrates, the production of volatile fatty acids (VFAs), the buffering capacity of the rumen and the rate of VFA absorption. Normal rumen pH is considered to be 5.8 and above. When pH drops below this for more than a few hours a day, a cow is considered to have SARA.

The major clinical signs of SARA are reduced or cyclic feed intakes and decreased milk yield and efficiency of milk production. Diarrhoea or variable dung consistency is also noticed along with regurgitated cud balls. SARA has also been associated with laminitis and subsequent hoof overgrowth, sole ulcers and sole abscesses. The lameness can be a significant source of chronic pain and financial loss and generally does not appear until weeks or months after the episode of SARA. Repeated episodes of SARA will also lead to inflammation and damage in the rumen wall. This is painful and will cause reduced feed intakes. If the damage to the rumen wall is severe, bacteria will leak from the rumen into the circulation, leading to abscesses in the liver and the lungs and infections elsewhere in the body. Therefore farms with SARA will often have high rates of culling and unexplained deaths.

SARA is diagnosed at the herd level rather than on an individual cow basis. Milk recording data can be used to monitor the fat: protein ratios of high risk groups such as fresh calvers (TMR feeding) and peak yielders (supplementary concentrate feeding). Low individual butterfat levels and low fat:protein ratios suggest SARA. Regular body condition scoring is a good way of monitoring nutritional management, whilst scoring rumen fill monitors feed intakes. Scoring the consistency of the dung is useful and dung samples can be given a sieve score to assess the amount of undigested fibre present. In a good sample, less than one third of faeces will be left in the sieve and the remaining fibre will be short length. Loose samples and samples showing excessive amounts of undigested fibre suggest SARA. Analysing rumen fluid samples taken directly from the rumens of 12 or more at risk cows can also help to diagnose SARA, although this is an invasive, time consuming technique and timing of sample collection is important. Samples with pH <5.6 suggest acidosis whilst pH values from 5.6 to 5.8 are borderline. If >25% of animals tested have a low pH then the group is at risk of SARA.

SARA can be prevented by adhering to some basic rules. Correct transition feeding of pre-calvers will prepare the rumen for the lactating ration by increasing the surface area for VFA absorption and providing a healthy microbe population. Fermentable carbohydrate in the lactation ration should be balanced by long fibre of 5cm in length to promote saliva production and rumination (cows will tend to sort straw from the ration if it is poorly chopped) and dramatic changes in the ration and periods of feed deprivation should be avoided. Addition of dietary buffers such as sodium bicarbonate will help, and supplementing the diet with microbials such as yeasts help promote a healthy rumen flora.

Ewe Nutrition

Now is the time to be making sure that ewes are fed appropriately. Getting nutrition correct in the pregnant ewe is vital for her *and* her offspring's health and overall productivity. **Body condition scoring** is a simple method of monitoring the condition of the ewe by palpating the fat over her loin. This should be done regularly though the year, but particularly at weaning, tugging, mid-pregnancy and lambing. Studies have been undertaken to identify the score a ewe should reach at each stage of her cycle to avoid disease or poor productivity later on (see table).

	Hill ewes	Upland ewes	Lowland ewes
At weaning	2	2	2.5
At tugging	2.5	3	3.5
Mid-pregnancy	2	2.5	3
At lambing	2	2.5	3

If ewes are too fat/too thin during pregnancy this can result in problems at lambing including twin lamb disease, hypocalcaemia, difficult births, poor colostrum quality and weak lambs born. Condition scoring now means that you can identify any ewes which are thin and require a bit more energy to avoid these conditions. Over-fat ewes at lambing often have very poor appetite at the point of lambing meaning they are at high risk of twin lamb disease (TLD) and fatty liver. It is useful to scan ewes to identify which are carrying singles, twins or triplets as these have different energy requirements. If you do not scan and aim

to feed the flock as if all are carrying twins then ewes carrying singles will be grossly overfed resulting in fat ewes, TLD, oversized lambs, potentially difficult births and also a waste of money!! Conversely, ewes

bearing triplets will be underfed resulting in excessive condition loss leading to TLD, low lamb birth-weight and poor lamb survivability.

For most of the year most sheep are kept on grass and do not need supplementation. However at lambing time, grass is less available due to time of year, weather or housing, so ewes need to be supplemented with conserved forage i.e. grass silage or hay. The amount a ewe **can** eat and how much she **needs** to eat depends on the **type** of forage and on the **quality** of that forage. It is vital to get your forage analysed so that you can assess how much you need to feed, and also if any supplementary feed is required. Some rough assessments can be made by looking and smelling the forage, but this is nowhere near good enough to make an adequate assessment.

The last six weeks of pregnancy is when the majority of the lambs' growth occurs, so consequently the ewes' energy and protein requirements also increase. In some sheep, forage alone will not meet this demand so supplementation with compound feeds, licks or feed blocks may be required, but they are also expensive. It is essential that ewes are given the appropriate amount of feed, as too much can not only waste money but cause the rumen to be acidic, causing a reduction in feed intake which is counterproductive. As a rule of thumb, **never** feed more than 0.5kg in one feed.

Barren Ewe Scheme

Once again MSD are running their Barren Ewe Scheme which subsidises the cost of testing barren ewes for Toxoplasmosis. This infection is one of the most common reasons for finding empty ewes at scanning, especially in young ewes. There is a vaccine available to protect the flock if the disease is diagnosed, so if your scanning results were disappointing and you would like to check for the presence of Toxoplasma, please get on touch with us to arrange blood sampling of a group of 8 empty ewes.

Allewinix/Flunixin

If you are a regular user of the anti-inflammatory product Flunixin, please note that we have changed to an alternative version called Allewinix. This product contains the same active ingredient but is licensed to go into the muscle (unlike Flunixin) and it is approximately £1.50 a bottle cheaper. The dose rate is a bit lower at 2ml/50kg so a bottle should go a little bit further.

Cefimam Tubes

We have also changed one of our mastitis tubes for an identical but cheaper product. Cobactan intramammary tubes have been replaced by Cefimam tubes, which have exactly the same milk and meat withhold times as Cobactan.

TB Meetings . The Wales TB eradication board will be hosting an opportunity to discuss the Cluster Project, Interim Land Management Agreements (ILAMS) - replacement to the previous pre movement exemptions on SOA'S, Informed Purchasing, Badger Vaccination and many more!

Events will be held at the following venues at 7.30 pm. Tea and coffee will be available

29th January 2015	Brecknockshire	Brecon Mart, Warren Road, Brecon, LD3 8EX
5th February 2015	Monmouthshire	Monmouthshire Livestock Centre, Croesbychan, Bryngwyn, Usk. NP15 2BH

Taking the bull out of breeding! Who decides which bulls fit your system? **DairyCo are holding a meeting targeted at staff and owners involved with the dairy herd on Thursday 15 January 2015 at 19:30 – 21:00** (refreshments provided) at Alice Springs Golf Club, Usk, Monmouthshire NP15 1PP

Joke Time: Interviewer: "Congratulations on winning the lottery."

Farmer: "Thank you."

Interviewer: "Do you have any special plans for spending all of that money?"

Farmer: "No, Not really. I'm just going to keep farming until the lottery money is all gone."

We hope that 2015 will be a happy and prosperous for all our clients!!