

## Rehydration

By Lucy Hepworth



One of the topics discussed at our recent dairy youngstock meeting was how best to rehydrate calves with scour.

### Are you using a well formulated product?

Due to formulation differences oral rehydration solutions (ORS) are not equally effective at rehydration. Homemade solutions should be avoided.

Product	Sodium mmol/L	SID Mmol/l	Bicarbonate or precursors	Alkalisng agent	Osmolality
Recommended levels	50-100	60-80	Avoid Bicarbonate	>60	240-350 mOsm/kg
Effydral	120	75	Bicarbonate	55	390
Lectade Plus	50	31	Citrate	10	304
Life Aid Extra	90	55	Citrate	37	387
Rehydion	100	75	Acetate and Formate	81	290
OsmoFit	50-90	60-80	Acetate and Propionate	>60	240-350
Scour Proof Extra	101	66	Bicarbonate	49	462

- The SID and level of alkalisng agent are important for correcting blood pH in the scouring calf with a low acidotic blood pH.
- Bicarbonate can over-alkalise the abomasum which may favour the growth of bacteria, slow emptying of the abomasum and therefore increase the risk of bloat.
- Osmolality is the concentration of particles dissolved in a fluid. Cow's milk is approximately 300 mOsm/kg. Trow recommend that the osmolality of an ORS should be 240-350 mOsmol/kg (hypo or isotonic).
- An ORS should have an adequate mineral composition in sodium, potassium, and chloride to correct mineral imbalances in blood due to diarrhoea.

### Are you mixing ORS with milk or water?

Whilst some products carry an instruction that they can be mixed with milk we would now recommend that this is avoided. When mixing ORS into milk, the osmolality of the solution can rise above

600 mOsm/kg which is a 'hypertonic' solution. Hypertonic solutions can exacerbate scour by pulling water into the lumen of the gut. Additionally, very hypertonic milk meals slow down abomasal emptying rates, which may increase incidence of gastrointestinal disorders such as abomasal bloat. Energy intake primarily relies on whole milk or calf milk replacer; **it should therefore not be removed from calves suffering from diarrhoea.**

It is **best to provide ORS early** when calves exhibit signs of dehydration and don't finish a milk feed, rather than wait until they start to scour. Recent research shows that offering ORS alongside usual milk allowance maximises recovery from diarrhoea. Milk provides sufficient energy for daily maintenance requirement, as well as to regenerate the damaged gastrointestinal mucosa. A practical approach is then to feed ORS in between milk meals through a teat bucket or a bottle. There should be a minimum of 2 hours between milk and ORS. If a dehydrated calf refuses to drink milk and ORS, then ORS can be drenched twice a day.

Time	Feeding Schedule	Meal Size
0600	Milk	2.5-3.0 litres
1100	ORS in water	2.0 litres
1600	Milk	2.5-3.0 litres
2100	ORS in water	2.0 litres

Water should always be available ad lib for animals of all ages and is even important for scouring calves. We would advise that all scouring calves are given Metacam alongside ORS to reduce gut pain and thereby promote normal feeding and drinking to recovery.

**If you would like to join our youngstock group, benefit from vet tech visits to monitor calf performance and attend quarterly calf focused meetings, please speak to Lucy. Farm membership costs £18 + Vat/month.**

## CLIENT UPDATE:

We will be contacting clients to update data consent and check all the details on your account are up to date. This is to ensure we can get the right information on upcoming courses and meetings out to each of you.

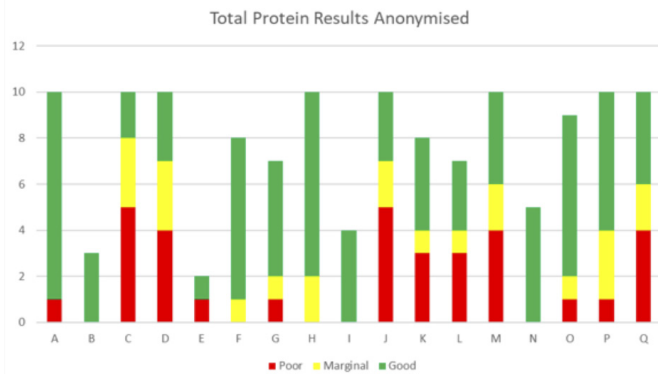
If you wish to receive our monthly newsletter digitally we can also add you to our mailing list when we get in touch, or email the farm office at [farmoffice@friarsmoorlivestockhealth.co.uk](mailto:farmoffice@friarsmoorlivestockhealth.co.uk) to add yourself to the list.



# #ColostrumIsGold

Thank you to all those who participated in our 'Colostrum is Gold' campaign, and attended the follow up meeting to chat through the results, and hear from guest speaker Dr Juliana Mergh Leão.

Throughout the campaign we visited 19 dairy farms to assess their colostrum quality using both Total Protein measurements we can run in-house in our lab, and IgG levels which were sent to an external lab



As shown in the graph, results varied drastically from farm to farm, which nicely opened up discussion at the meeting as to which on-farm strategies were yielding the best results. Generally, those farms measuring colostrum quality with a refractometer (and storing only good colostrum for future use) were seeing the best results. Getting at least one feed into the calf via tube/bag was also a technique utilised by some of the better performing farms.

Dr Juliana from SCCL also gave a very interesting talk on how colostrum powder can be used in a number of ways on farm – in an emergency when no maternal milk is available; to enrich poorer quality colostrum and to create a “transition milk” for calves in the first week of life. SCCL colostrum powder is made from collected colostrum from over 700 dairy farms. The colostrum is not skimmed or reformulated in any way, and is tested for quality and safety.

Colostrum should be given quickly (within 2 hours of birth), be of good quality (25% Brix or >50g/L) and of an appropriate quantity – 10% of bodyweight in the first feed, followed by another 5% of bodyweight within the subsequent 6 hours. The meeting generated some interesting discussion which we hope everyone found useful. Should you like any more information on the results of the study, or would like to speak with a vet to find out how colostrum practices could be improved on your farm please do not hesitate to get into contact.

By Becca Price & Martha Twist

## DATES FOR YOUR DIARY:

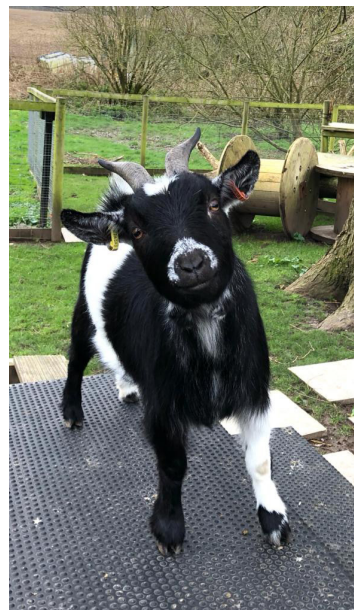


**Smallholders Club: Husbandry & Medicine Use** @ the function room at The Fox Inn, Ansty, DT27PN 6:30pm



**Dung Beetle Safari with Claire Whittle (Dung Beetles for Farmers)** Please ring the practice to reserve your place. Youngstock, beef and flock group members FOC.

More information on our courses can be found on our website at [www.friarsmoorvets.co.uk/calendar/](http://www.friarsmoorvets.co.uk/calendar/)



## SMALL-HOLDERS CLUB

We are excited to be launching our new “Small-holders Club”. Anyone who keeps farm animals or has an interest in doing so is very welcome. To find out more come along to our first free meeting where we will be discussing animal husbandry and medicine use.

Call the office to book your place on 01258472314.

## STAFF NEWS:

Congratulations to vet tech Marianna, who passed her RoMS training course last week. She joins our team of vets and techs on the register of mobility scorers.

