Farmers' Focus

Practical approaches to calf scour

AUGUST 2024

As the number of young calves is set to rise over the next couple of months, we thought it would be a good time to give an update on the best ways of managing a scour outbreak. This newsletter is aimed at managing calves from day one to weaning.

The economic impact of calf scours

- Most common cause of calf mortality in the first 6 weeks of life
- Damage to the gut results in poorer growth rates, poorer conception and a lower first lactation yield
- Cost of treatment and time!

It is important to determine the cause of scours as many of the preventative measures and treatment options are specific to the underlying disease. The table below highlights the specific measures for each disease, but the overall recommendations for any calves with scours is the following –

- ✓ **Isolation** – ensure any affected calves are isolated to reduce the rate of spread.
- ✓ **Oral rehydration** – depending on the product used, this is either mixed with milk or water, and should be given every 4 hours until the calf is clinically well. A healthy calf will drink 4 litres of fluid a day, but a scouring calf will need another 4 litres on top of this to compensate for losses by scouring.
- ✓ **Hygiene** – adequate disinfection of the calf pens, especially when moving between groups of calves.

Age	Disease	Prevention*	Specific treatment*
1-6 days	*E. coli*	Rotavec/Rotagal vaccine	Injectable antibiotic course
4 days to 3 weeks	Rotavirus	Rotavec/Rotagal vaccine Rotagen combo	Rotagen combo
1 to 3 weeks	Coronavirus	Rotavec/Rotagal vaccine	Usually self limiting if its the only infection present
4 days to 3 weeks	*Cryptospirosis*	Halocur Rotagen combo	Halocur Rotagen combo
1 week +	*Salmonella*	Salvexin+B vaccine (when dealing with herd issues)	Injectable antibiotic course
4 weeks +	Coccidiosis	Baycox	Baycox
Any age	Nutritional scours	Ensure milk replacer is mixed appropriately Minimise stress	

*more information on products on the next page

How do we diagnose the cause of scours?

Fresh muck samples can be run at the practice to diagnose the cause of scour, regardless of whether the calf has had any treatment or not. There are two main ways we go about diagnosing scours in practice -

Rapid ELISA tests

Similar to COVID lateral flow tests, a small dung sample can tell us if a calf is positive for E. coli, Crypto, Rota or Coronavirus in as little as 10 minutes with a high level of accuracy

Faecal egg counts

These are used to diagnose Coccidiosis, the same way we screen for high worm burden once calves are weaned

What products are available and how should they be used?

Rotavac / Rotagal

E. coli	Single dose vaccine given to pregnant cows between 12 to 3 weeks prior to calving
Rotavirus	This boosts the dam's antibody levels, which is then transferred to the calf through colostrum
Corona	Therefore, good colostrum intake is essential to get the full benefits of the vaccine
Crypto	
Salmonella	
Cocci	

Rotagen Combo

E. coli	Feed additive containing antibodies to Rotavirus that can be used both as a prevention and a treatment, with some products will also containing antibodies against *Crypto*
Rotavirus	Can be mixed into milk or water (then given as a drench)
Corona	Given daily as a course of 5 days, with higher doses given if treating a calf that is currently scouring
Crypto	
Salmonella	
Cocci	

Halocur

E. coli	Can be used as both a prevention and treatment
Rotavirus	Give as an oral drench once daily for 7 days, ideally beginning 24 hours before time scours is expected to begin
Corona	In the face of an outbreak, this is best given from 24-48 hours of age
Crypto	
Salmonella	
Cocci	

Baycox

E. coli	An oral drench that can be used as both a prevention and treatment
Rotavirus	Lasts approximately 45 days in the system, so usually one treatment is all that is needed
Corona	Recommended to give to calves at 3 to 4 weeks old as a prevention, when cocci is known to cause scours in young calves
Crypto	
Salmonella	
Cocci	

OptiCalf

E. coli	Feed additive which aims to increase water absorption in the gut in milder cases of scours
Rotavirus	This product doesn't target any particular disease, so can be used in any scenario, with the exception of severe bouts of scours where specific treatment should be used
Corona	Designed to be palatable, so calves (normally) like the taste
Crypto	
Salmonella	
Cocci	

Scourban Plus

E. coli	Oral drench to treat the bacterial causes of scours, given twice daily
Rotavirus	Also contains compounds to help reduce painful spasming of the gut as well as protecting inflamed gut lining
Corona	As bacterial scours are generally quite rare, consider diagnostics in new scour outbreaks to make sure the right treatment is being given!
Crypto	
Salmonella	
Cocci	

A few more points to consider...

The importance of BVD?

Despite the virus' name, Bovine Viral Diarrhoea is rarely a cause of scours in its own right. However, it is commonly responsible for **depressing the immunity** of calves, which makes them more susceptible to the infectious causes of scour. When a PI (persistently infected calf) is born, they will constantly release the BVD virus into the environment, infecting the other calves around them. Whilst these calves infected will get over the BVD infection (they cannot become persistently infected once they are born), their immunity will drop and they may begin scouring.

Any PI calf will eventually die from BVD so early identification of these calves to remove them from the herd is essential. If BVD is suspected, the best first measure is to see if the virus is circulating. This is usually done by looking at the levels in the bulk milk.

What about milk feeding?

Milk feeding should be continued throughout a scours outbreak. This may mean giving electrolyte solutions alongside milk feeds, unless the type of electrolyte used can be mixed directly into milk. It is important to not mix an electrolyte solution (already mixed with water) into milk replacer as this will make the calf's drink too dilute.

Does this scouring calf need antibiotics?

Despite being commonly used, very few causes of scours involve bacteria. However there are a few situations where antibiotics should be given. The answer can be found by asking these quick questions.

Does the calf have any of the following?

- Temperature >39.5C
- Bloody scours
- Very weak or unable to stand

YES → **Antibiotics are warranted**

To decide how to treat, consider if this is an isolated case or an outbreak?

If just a few calves are affected, isolate and treat with injectable antibiotics

If multiple calves are scouring, consider treating the group with oral antibiotics such as Scourban

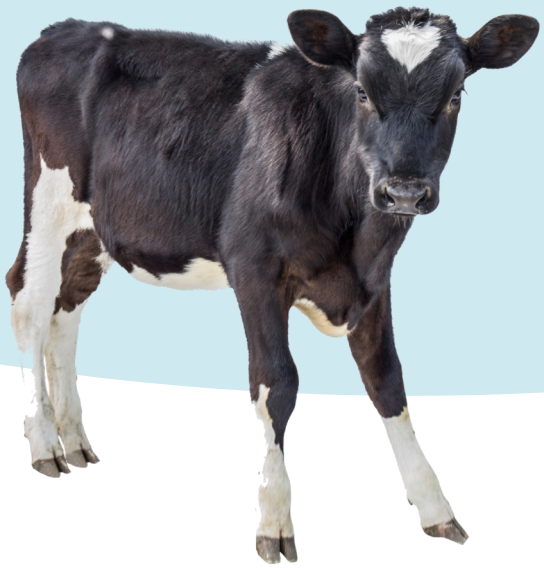
NO

Has there been a positive diagnosis of either *E. coli* or *Salmonella* during this scours outbreak, or an outbreak in the previous few years?

YES → **Antibiotics are warranted**

NO

Antibiotics will not help this calf, consider a specific treatment if the cause is know or take a scour sample to the practice for diagnosis



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