CalfCare leaflet series

ANIMAL HEALTH IRELAND
Contributing to a profitable and sustainable farming and agri-food sector through improved animal health

Summer Scour Syndrome

CalfCare Leaflet Series Vol 14 February 2022

CALF HEALTH PROGRAMME

Animal Health Ireland, 2-5 The Archways, Carrick-on-Shannon, Co. Leitrim, N41 WN27

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What is Summer Scour Syndrome?

Summer Scour Syndrome is a collection of clinical signs, characterised by scour and rapid weight loss which are not caused by the common infections/infestations of calves at grass. Other clinical signs include lethargy, weakness and lack of rumination, which can progress to profound weakness and death. Some calves may develop oral and oesophageal ulceration or ulceration of the muzzle. Not all calves in the group are affected and severity can vary from year to year and farm to farm. It typically occurs in dairy calves within a month of turnout to grass and up to 12 months of age. The affected calves are usually unresponsive to conventional treatments, only responding to removal from grass.

What causes Summer Scour Syndrome?

Summer Scour Syndrome is a relatively new condition and has not yet been widely researched. Therefore, this document has been developed from practical experience of the condition in recent years. This advice will be updated when further research is published. The cause is not definitively known and multiple theories exist as to what the most likely risk factors are. The one common factor to all cases is a grazing diet (exclusively or partially) in first grazing season calves. An infectious cause has not yet been identified and the disease is thought to relate to nutritional issues, such as when the rumen is insufficiently developed to digest forage. Only when the common causes of diarrhoea and weight loss in grazing calves are ruled out (through the use of diagnostic faecal samples, grass trace element analysis, trace element blood testing and response to treatment/supplementation), can a diagnosis of Summer Scour Syndrome be made with more confidence.

Summer Scour Syndrome is more common in calves grazing 'rich' or 'lush' pastures, typically with a high crude protein (greater than 20%) and low fibre (less than 40%) content per kg of dry matter ingested. Calves are selective grazers and preferentially consume the top, leafier parts of the grass, which contain more nitrates and non-protein nitrogen (NPN). It is suspected that consumption of large quantities of nitrates and NPN by young calves, with immature rumen development might lead to an excessive build-up of ammonia in the rumen. Inadequate rumen development may also lead to an unstable pH for rumen microbes to function appropriately which may also potentially contribute to the syndrome.

What other conditions can resemble Summer Scour Syndrome?

While calves should not scour at grass, occasional looseness is to be expected as the grass consistency and quality can vary farm to farm. However, the diarrhoea associated with Summer Scour Syndrome is more severe. Other conditions which may resemble Summer Scour Syndrome are listed below. Your veterinary practitioner can distinguish between these diseases and summer scour.

- Coccidiosis.
- High worm burden.
- Mineral issues - such as molybdenum toxicity (with or without concurrent copper deficiency) and copper toxicity.
- Rumen acidosis (from heavy concentrate feeding).
- Salmonellosis.
- BVD.
- Respiratory disease.

How can I treat calves with Summer Scour Syndrome?

Treatment options should be discussed with your veterinary practitioner, as there is no single cure that works in all cases and it is important to begin symptomatic treatment as quickly as possible after diagnosis. Affected animals are immunosuppressed and may have concurrent disease (e.g respiratory disease) which would also require treatment.

The most important aspect, is to monitor dairy calves closely for evidence of diarrhoea and weight loss during their first 4 to 6 weeks post turnout to grass. If, following a discussion with your veterinary practitioner, Summer Scour Syndrome is suspected, then affected calves should be removed from grass immediately. The earlier that calves are removed from grass the greater the chance of recovery for the calves involved. This may only involve housing 10-20% of the calf group, as usually only a small proportion of calves are affected.

Housed calves should be fed good quality forage such as hay, silage or straw along with a good quality calf concentrate and have ad-lib access to water. Following a period of 4-6 weeks, if calves are recovered sufficiently, they can be returned to a pasture that is not lush and provided with access to extra fibre and good quality concentrates.

How can I prevent Summer Scour Syndrome?

STEPS TO PREVENTION	WHY?
Review calf rearing process	Discuss with your veterinary practitioner and farm advisors if your calf rearing strategy is optimal. It may be appropriate to delay weaning to at least 10 weeks of age.
Wean calves gradually	Gradual weaning ensures a smooth transition from a milk diet to a forage diet, concentrates should be introduced to calves from the first week in life. Begin weaning up to 4 weeks before removing milk completely and calves should be eating at least 1kg of concentrate daily consistently before weaning. See AHI leaflet on Early Nutrition and Weaning.
When weaning, make no other dietary changes	Other dietary changes will increase stress and take longer for the calf to adjust. For farms with Summer Scour Syndrome issues and depending on the farm facilities and the type of grazing available, it might be worthwhile to consider retaining calves indoors on a concentrate and high fibre diet for at least 1 week after weaning before turnout to pasture.
Ensure calves have high levels of fibre in the diet from stemmy grass or older swards, when first turned out to pasture	Calves need adequate levels of fibre and on farms with Summer Scour Syndrome issues, this may include grazing more stemmy grass covers or providing an additional fibre source (straw or hay). For farms with these issues, calves should avoid grazing reseeded pastures, or paddocks with very leafy (lush) grass for at least 2 months after turnout.
Strip graze calves to encourage consumption of both the leaf and stem of the grass	Calves may prefer more lush grass but may not be able to digest large amounts of it.
Avoid pastures that have had slurry or nitrogen applied recently	Slower growing pastures have less nitrogen and more fibre.

Table 1. Guidelines to help prevent Summer Scour Syndrome in first season grazing youngstock

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