



Copy for British Dairying – Animal health feature (Word count – 1,110)

Research proves that grazing management has a vital role to play in reducing the level of exposure and potential growth setbacks caused by cattle parasites, particularly in first grazing season animals.

Additional tool for parasite control

With AHDB Dairy suggesting dairy heifer calves take an extra three months to reach breeding weight when burdened with gastrointestinal parasites, at an extra cost of £260/head, managing this risk should be a priority for farmers ahead of turnout this spring.

A recent paper published by Andy Forbes, Honorary Professor at the University of Glasgow's School of Veterinary Medicine and COWS (Control of Worms Sustainably) technical representative, highlights how grassland management can play a significant role in reducing the challenge and impact of cattle parasites, particularly in young stock.

"Dairy heifer calves are the foundation of a successful dairy herd, but in their first grazing season they're at their most susceptible to parasite infections due to their lack of immunity as they've not previously been exposed to parasitic worms.

"Ensuring they get off to the best possible start with minimal exposure to parasite infections should be a priority," says Professor Forbes.

"Farmers manage pastures and grazing animals to ensure swards provide the right level and type of nutrition to support animal performance, which for young dairy calves is aimed at getting them to 65% of their adult body weight by the time of first service, at the target age of 15 months.

"But, it's also possible to mitigate risks and provide valuable parasite control by playing close attention to pastures, without compromising performance, and there are several ways in which this can be achieved dependent on what suits the farm system, and the type of cattle parasite being controlled," he adds.

Mixed age grazing



Professor Forbes explains that there can be clear benefits in managing grazing animals of different ages for the control of parasitic gastroenteritis (PGE).

“Although not always the case, it’s likely that older cattle have a more robust immunity to common gastrointestinal worms. As a result, they can tolerate worm infections better and excrete lower concentrations of worm eggs in their dung when grazing, potentially reducing the level of pasture contamination.

“Therefore, when first season grazing animals are grazed with older cattle it often means they’re at a lower risk of being exposed to infectious parasite levels that will detrimentally impact growth and development.

“Another approach to consider is what is known as the ‘leader-follower’ system,” says Professor Forbes.

“This method is largely based on a rotational grazing system where calves are grazed ahead of older cattle, and moved to fresh pasture when the grass is grazed to a level that continues to provide adequate grazing for the cattle that are following on.

“Initially young stock are turned out in spring onto fresh grass where parasite populations will typically be low, and as they rotate through the paddocks, so long as they remain on each paddock for less than three weeks, they should not be exposed to a high parasite challenge.

“Older cattle that follow the calves in rotation will pick up infection, but the effect will be limited and pasture contamination will be lower than if the calves had remained on the same paddock throughout grazing.”

He explains that a study which saw dairy calves grazed in rotation with in-calf heifers through nine paddocks over a period of 35 days, resulted in the calves gaining an average daily live weight of 0.81kg compared to 0.39kg in a matching group of calves that grazed a single paddock throughout the season.

“The same study did highlight that the growth rate of the in-calf heifers in the rotation did drop slightly from 0.84 kg/day to 0.78 kg/day when compared to their counterparts that grazed as a single age group, but the difference was marginal.



"It really goes to show how planned management of cattle at turnout can play a key role when it comes to reducing the potential exposure young stock have to PGE and ensuring good performance.

"However, it must be remembered that this approach will not protect against lungworm, so it's important that lungworm vaccination is still practiced on farms with a history or risk of infection," he says.

Using low risk pastures

In the absence of grazing cattle, the population of over-wintered gastrointestinal worm larvae that survive on pastures declines steadily, and by mid-July the number of larvae is very low.

"This forms the basis for several approaches to parasite control such as delayed turnout, moving cattle to aftermaths in July, and the strategic early season use of anthelmintics," explains Professor Forbes.

"Late turnout will not suit most grass-based farm systems as it may not be seen as optimal for the use of grassland, but it has been shown to significantly reduce the challenge from gastrointestinal parasites and their impact on growth."

As an example, Professor Forbes explains a study carried out in Denmark where calves were turned out in mid-June, and maintained on the same pasture for the rest of the grazing season, gained an average of 39kg/head more than those turned out in May.

"In the same study, another group of calves also turned out in May, but moved to a 'low' risk pasture in early July, gained an average of 31kg/head more than those that were not moved, which highlights the benefit of moving calves off potentially high risk pastures in the summer months.

"Although, delaying grazing until July may not be feasible for many farmers, it's worth considering how the integration of low risk pastures should be a key component of farm parasite control plans.

"Silage or hay aftermaths for example, particularly those that haven't been grazed for 12 months or more, can provide a 'low' risk option to move young stock onto during early or



mid-July. They should therefore be considered when drawing up grazing plans for the season ahead.

“Understanding the relative risk of a field being contaminated with parasites relies on knowing when either cattle or other hosts of those parasites were last on the field and how it has been managed subsequently,” he adds.

“There is strong evidence to support the conclusion that grazing management can help contribute to the control of parasites in cattle and mitigate their potentially detrimental effects.

“Anthelmintics when used responsibly, and in line with the COWS 5R’s, still have their role to play in keeping on top of cattle parasite burdens. But, grazing management can help reduce the reliance on anthelmintics which is worth considering when the ‘responsible’ use of medicines continues to be such an important driver in the industry.

“Speak to your vet, SQP, farm adviser or veterinary pharmacist for more advice on implementing an integrated parasite control plan that is suited to your farm system,” says Professor Forbes.

Assessing risk of cattle infection with parasites during the grazing season

Risk factor	High	Medium	Low
Field factors			
Field type	Permanent pasture	Silage/hay aftermath	Newly sown, ungrazed leys
Grazing history	Grazed by cattle less than one year old within last year	Grazed by cattle 1-2 years old within the last year	Grazed by adult cows and other species within last year

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