Calving season is a stronger determinant of worm burdens in pasture-based beef production than the level of residual larval contamination at turnout

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Context
Gastrointestinal nematodes are generally regarded as a minor problem in suckler calves; however, their importance may increase due to managerial changes such as autumn calving, use of permanent pastures and a lack of anthelmintic intervention.

Main conclusion
In calves grazed with their dams on permanent pastures, calving season was a stronger determinant of gastrointestinal nematode burden than the level of residual pasture contamination by overwintering larvae.

Approach
A grazing trial with four groups of cow-calf pairs was conducted to test the influence of different combinations of early (mid-December to early February) and late (mid-February to early April) calving on parasite burden in calves turned out on pasture containing low and high residual levels of overwintering infective parasite larvae. Animal performance and parasitological variables (eg, nematode faecal egg counts, serum pepsinogen and specific anti- Ostertagia antibody levels) were measured at regular intervals throughout the grazing season.

Results
There was no significant difference in faecal egg counts between groups, but parasite exposure, as indicated by serum pepsinogen and specific antibody levels, was generally higher in early-born than in late-born calves (Fig 1). High antibody levels and average faecal egg counts in the range of 5 to 10 eggs per gram faeces were also consistently observed in the cows. This resulted in significant pasture contamination by the dams, which was greater than the effect of residual contamination by infective larvae. Passive transfer of maternal Ostertagia antibodies was observed in late-born calves at turnout.

Interpretation
Calving season is important for the incidence of pasture-borne gastrointestinal parasites in suckler calves. Thus, it seems advantageous to postpone the calving date to mid-spring.

Significance of findings
There is currently a growing trend in Sweden for early calving in suckler herds. This seems to result in increased worm burdens of pasture-borne parasites. The effects of this on animal productivity and health should be studied further.
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