

# Replacement calf grazing and Johne's disease

Lawrence Gavey, Johne's disease Programme Manager

**T**he first publication from this project reported on the modelling of spread within herds. This will be followed by modelling of spread between herds. This month, we look at how farmers can apply this work to improve control and management of Johne's disease in their herds.

Protecting calves against exposure to MAP, the bacteria that cause Johne's disease, is the essence of control of Johne's disease. How can grazing be managed to support that control? Whether an animal becomes infected with MAP is determined by a combination of their susceptibility (or resistance) and the amount of MAP to which they are exposed.

New-born calves are very susceptible to infection with MAP, which is why the Johne's programme emphasises the importance of clean calving areas, early removal of calves to clean calf pens, and hygienic husbandry, particularly calf feeding. This susceptibility declines during the first 12 months after birth, so yearlings and adults are considered moderately, but certainly not totally, resistant to infection. So the susceptibility of calves at pasture falls between those of new-born calves and adult cattle.

Pasture can be contaminated with MAP from grazing adult cattle and from slurry. Modelling done in collaboration with the Johne's programme also recognises that MAP contamination can spread to adjacent pastures. MAP will gradually die off on pasture over months, but remnants of MAP can certainly survive for at least 12 months in the relatively cool and wet Irish climate.

If Johne's disease was the sole consideration, herdowners would avoid grazing calves on pasture that has been grazed by adult cattle or received slurry in the preceding 12 months. The longer the interval, the less the risk of pasture exposure.

Parasite control, addressing a more immediate animal health concern, provides somewhat contradictory advice. This parasite control advice is to avoid dedicating paddocks only for calves where parasite load will multiply, and allow prior grazing of adult cattle to decrease the parasitic load of pasture by ingesting larval parasites and, being more resistant, not re-infesting the pasture. On heifer-rearing farms, where prior grazing by adults is not available, alternative parasite management protocols must be employed.

The 'leader/follower' system of grazing commonly practised in Ireland addresses both of these concerns. Calves graze the young fresh paddocks of grass first but are moved quickly on, followed by older stock, typically yearlings, to graze the remaining grass. This minimises the risk of exposure to parasites and to MAP, especially on fresh paddocks early in the year when the parasites and MAP

IRISH JOHNE'S CONTROL PROGRAMME

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



will have declined over the winter and when the grazing calves are most susceptible. It also enables the yearlings or adults, which are more resistant than the calves to both worms and MAP, to 'vacuum' the pasture of worm larvae. Then when the calves are rotated back, they will be exposed to reduced parasite load and be more resistant by age to MAP and worms.

You can enhance this control in several ways. Rotate through multiple pastures to delay re-grazing and allow MAP and larval load to fall again. Follow the calves only with yearlings rather than the adult herd because generally yearlings are too young to shed infective loads of MAP, even if infected. Use reseeded fields, or land used for silage in the last season, to provide even greater reductions of pasture loads of both MAP and worms.

Herds registered in the Irish Johne's Control Programme can also make use of the results of the funded herd testing to identify test-positive cows that are contributing the greatest risk of spreading Johne's disease. The Johne's programme does not require that these animals are culled immediately, but advises that they are removed as soon as practicable. Early removal of these cows will minimise the contamination of fields and surface water that exposes adult cattle, and particularly calves and yearlings at pasture, to infection risk. It also ensures those cows will not be present at the next calving to contaminate the calving and calf-rearing areas, bear high-risk calves, or supply colostrum or milk to replacements, for even greater control of spread and impacts of Johne's disease.

In summary, join the IJCP, and avoid or delay as much as possible grazing calves on land grazed by adults. For more information, see the Animal Health Ireland website.



IRISH JOHNE'S CONTROL PROGRAMME

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



**Johne's Control**  
AnimalHealthIreland.ie