



Johne's Control Summary

Key Points

January 2025

Below are key points to consider when considering a Johne's control program:

1. Follow the three-pronged approach for Johne's control- reduce transmission to calves, ensure biosecurity and reduce environmental contamination (including test and cull)
2. Test and cull alone are unlikely to reduce the long-term incidence of Johne's on a farm
3. Ensure all lactating animals are tested at a whole herd milk test close to when culling decisions will be made. If any cows were missed for any reason, ensure an additional test is undertaken (serum ELISA). Retest any cows without a result, including "reject" milk samples
4. Test carry overs before and after being carried over
5. 2023 season data show, on average a 98%, 90% and 80% correlation between LIC Johne's disease milk test: high positive, positive, and suspect results with blood ELISA respectively¹. Make your recommendations accordingly
6. Overseas work shows calf-to-calf spread can occur. Be aware of this to reduce transmission within age groups^{2,3}
7. Ensure test positive animals are culled before calving (in-utero, colostrum/ milk infection risk) with dams being a source of environmental contamination for susceptible calves
8. Ensure calf rearing areas are not cross contaminated with faecal material- e.g. surface run off, consider tractor buckets etc
9. A long latent period means that a Johne's control plan, including annual testing needs to be followed for at least five to six consecutive years to break the transmission cycle. In some herds, annual testing will need to be maintained for even longer, if risk is high from on-farm management practices⁴
10. Subclinical Johne's disease has well-recognized and significant effects on production⁵. Ongoing LIC research is occurring to assess production impacts in NZ with results to be published in due course
11. Daughters of test positive/ high positive dams present a higher risk

¹ White, R (LIC) personal communication 2024.

² Quantifying transmission of Mycobacterium avium subsp. paratuberculosis among group-housed dairy calves Corbett, et. al., Veterinary Research, 2019.

³ Invited Review: Improved control of Johne's disease in dairy cattle through advancements in diagnostics, testing and management of young stock. Martins, et. al. Journal of Dairy Science, 2024.

⁴ Dawson K, et. al. (2024). Johne's disease insights: What we've learnt from ten years of herd milk ELISA testing at LIC to help your farmer clients. VetScript, April/May 2024.

⁵ Rasmussen, et. al. (2021). Economic losses due to Johne's disease (paratuberculosis) in dairy cattle. J Dairy Sci 104:3123-3143.

12. Daughters of dams testing positive or high positive for Johne's disease were over three times more likely to test positive if born in the same season as the dam's test and twice as likely even if born two or more years earlier. About one-third of this risk depends on herd management practices⁶
13. For more detailed information on management practices to reduce risk, see the DairyNZ Johne's disease toolbox, found at <https://www.dairynz.co.nz/media/gyibqbzc/animal-johnes-disease-management.pdf>

⁶ Dawson KL (2024). Damning Evidence: The maternal impact on risk of Johne's Disease in replacement dairy heifers in New Zealand. Presentation at Dairy Cattle Vets stream, NZVA Conference, Christchurch NZ.