

Risk Assessment and Management Strategies to Control *Salmonella* Dublin and Paratuberculosis in Dairy Herds

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Abstract

Salmonella Dublin and *Mycobacterium avium* subsp. *paratuberculosis* are both infections that lead to economic losses and decreased animal well-fare in dairy herds. They are both spread mainly via the faecal-oral route or intake of infected milk, and may spread from apparently healthy animals.

Salmonella Dublin is included in a national surveillance program in Denmark, whereas for paratuberculosis a voluntary intervention program has been initiated. This has increased the desire to intervene against both infections. Due to the common infection routes and the assumption that most of the approximately 1000 dairy herds that are infected with *Salmonella* Dublin also have paratuberculosis, it was decided to include both infections in a manual for advisors which serves as a practical tool to effectively plan control measures against both infections. The approach has led to increasing knowledge and interest in intervention against *Salmonella* Dublin and paratuberculosis among farmers.

The primary aims of the manual are: a) to serve as a learning tool for the farmer; b) to establish a practically feasible control plan. A risk assessment of important transmission routes is conducted followed by a detailed plan on management strategies in a specific herd. The plan may include use of diagnostic tests, where the results are used for decision support and to monitor the successful implementation of the control plan. Based on the test-results, animals are divided into risk-groups, which should be managed separately. High-risk animals are not necessarily culled, but may be managed as highly infectious thus special risk measures should be instituted to avoid further spread of the two infections. Principles and examples from the manual are described in the proceedings from the 8th International Colloquium on Paratuberculosis in 2005 (Nielsen & Nielsen 2006).

References

Nielsen, L. R. and Nielsen, S. S. (2006) The use of risk assessment, test and management strategies to control paratuberculosis and *Salmonella* Dublin in dairy herds. Manning E. J. B. & Nielsen, S. S., eds. Proceedings of the 8th International Colloquium on Paratuberculosis. International Association for Paratuberculosis, Madison, USA, 218-225.