

TOP FARMERS KNOW-HOW AUDIO SALMONELLA IN CATTLE



WHAT IS SALMONELLA?

- Bacteria that live inside carrier animals (this is the main source of spread of Salmonella)
- Can survive in the environment for weeks to months
- Can infect all kinds of animals including humans (zoonotic disease)
- Many different strains, most prevalent in cattle:
 - › Brandenburg (primarily causes abortions)
 - › Typhimurium (primarily affects the gut)
 - › Bovismorbificans (primarily affects the gut)
- All types of Salmonella can cause outbreaks and deaths
- Once Salmonella is established in a herd, it cannot practically be eliminated

Salmonella Brandenburg (abortive)

- First outbreaks recorded in 1996
- Causes late term abortions, sickness and death
- Occurs in the late dry period (late winter/early spring)
- In naïve herds first calving heifers seem to be most affected
- Up to 35% of first calving heifers can abort
- In outbreaks, mortality rates vary (around 5%)
- As of 2019/2020 only seen in the South Island

Salmonella Typhimurium and Bovismorbificans (gut-affecting)

- Typhimurium has been in NZ since at least the 1950's
- Bovismorbificans is an emerging disease, causing outbreaks in dairy cattle since 2015
- Causes scours (often bloody), sickness and death
- Outbreaks tend to occur in times of stress (most often over calving) but can happen at any time of the year
- Affects all age groups including calves
- Case rates and mortality varies with herd immunity and management risk factors
- Occurs nationwide

SALMONELLA VACCINATION

- Salvexin[®]+B is the only Salmonella vaccination for cattle and sheep in New Zealand
- It contains four strains of Salmonella: Hindmarsh, Brandenburg, Typhimurium and Bovismorbificans
- For preventative vaccination give two shots in the first year (sensitiser & booster at least 4 weeks apart), 2nd shot should be at least 2-3 weeks before the risk period
- An annual booster is required for ongoing protection
- In the face of an outbreak, vaccination should be as early as possible to reduce stock losses (this strategy is not recommended for protection against *Salmonella* Brandenburg abortions in sheep)
- The most practical time for dairy farmers to vaccinate is around drying off

MANAGEMENT PRACTICES TO MINIMISE SALMONELLA RISK

- Reduce stress (gradually introduce diet changes, lower stocking densities)
- Avoid the use of a pelletised magnesium oxide (choose other sources of magnesium supplementation)
- Fence off feed bins to prevent animals from defecating in them
- Don't graze effluent paddocks around calving time
- Manage birds and pests to keep them from spreading Salmonella
- The most common way Salmonella is introduced to a farm is through healthy looking carrier animals (cattle, sheep etc.). Higher risk practices include:
 - › Off-farm grazing
 - › Intensive feeding
 - › Purchasing/leasing stock
 - › Shared boundaries/stock yards
- Farms at risk of Salmonella should consider preventative vaccination

