

# TOP FARMERS KNOW-HOW AUDIO SALMONELLA IN SHEEP



## 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, two most prevalent in sheep:
  - › Hindmarsh (primarily affects the gut)
  - › Brandenburg (primarily causes abortions)
- All types of Salmonella can cause outbreaks and deaths
- Once Salmonella is established in a flock, it cannot practically be eliminated

### **Salmonella Hindmarsh (gut-affecting)**

- Has been in New Zealand since at least the late 1940's
- Sudden death is often the first sign of an outbreak
- Outbreaks tend to occur in times of stress and deaths may continue sporadically for months
- Seasonal disease, occurring from late summer through early winter (most often over mating)
- Outbreaks most commonly seen in intensively managed and well-fed flocks
- Case rates and mortality varies with flock immunity (average approximately 1% mortality) may accumulate to significant numbers
- Occurs nationwide

### **Salmonella Brandenburg (abortive)**

- First outbreaks recorded in 1996
- Causes late term abortions, sickness and death
- Occurs in late pregnancy (early spring)
- Outbreaks are sudden and escalate quickly
- Up to 15% can abort and up to 50% of aborting ewes can die
- As of 2019/2020 only seen in the South Island

## 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
- Annual booster is required for ongoing protection
- In the face of an outbreak:
  - › **Hindmarsh / Gut-affecting:** Vaccination should be as early as possible to reduce stock losses
  - › **Brandenburg / Abortive:** Vaccination is not recommended in the face of a Brandenburg outbreak unless advised by your vet
- The most practical time to vaccinate for sheep farmers
  - › **Gut-affecting:** between weaning and mating
  - › **Abortive:** between rams in/out and scanning

## MANAGEMENT PRACTICES TO MINIMISE SALMONELLA RISK

- Reduce stress (gradually introduce diet changes, lower stocking densities)
- 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

# TOP FARMERS **KNOW-HOW** AUDIO SALMONELLA IN SHEEP



## MANAGING AN OUTBREAK

- Practice strict biosecurity between affected mobs and other groups of sheep on the property
- Involve your vet to take samples and confirm the diagnosis
- Isolate sick animals/flocks
- Monitor at-risk groups closely
- Treating individual sick animals is not usually practical
- Use strict hygiene practices when handling sick animals or working in their environment
- Prevent vulnerable (old, young, pregnant or sick) people from having contact with animals and their environment
- Use disinfectant and wear gloves, overalls and gumboots when handling at-risk animals
- Contain and/or destroy contaminated material e.g. limit sick animal movement and bury foetuses, placenta and carcasses as soon as possible
- For gut-affecting disease vaccinate all stock with Salvexin®+B as soon as possible under veterinary guidance (ensure a sensitiser & booster is given to previously unvaccinated animals and an annual booster given to all other animals)
- For abortive form, spread sheep out and consider a preventative vaccination programme next year.

## Don't wait for Salmonellosis to strike.



**Vaccination reduces the impact of an outbreak and minimises production losses. Protect your flock with Salvexin®+B**

## REFERENCES:

- ACVM. (2018). A007886 Salvexin+B Leaflet. <https://eatsafe.nzfsa.govt.nz/web/public/acvm-register>
- Baker et al. (2007). A recurring Salmonellosis epidemic in New Zealand linked to contact with sheep. *Epidemiol Infect.* 135:1. 76-83.
- Clark et al. (2004). Salmonella Brandenburg—emergence of a new strain affecting stock and humans in the South Island of New Zealand. *NZVJ.* 52:1. 26-36.
- Clark et al. (2002). Salmonella in animals in New Zealand: the past into the future. *NZVJ.* 50:3. 57-60.
- Daly, S. (2019). Salmonella Brandenburg on Canterbury dairy farms. *Proceedings of the Society of Dairy Cattle Veterinarians of the NZVA.* 29-30.
- Gruenberg, W. (2019). Overview of Salmonellosis. *Merck Veterinary Manual Online.* <https://www.merckvetmanual.com/digestive-system/salmonellosis/overview-of-salmonellosis>
- Li, H., et al. (2005). Vaccination of pregnant ewes against infection with Salmonella Brandenburg. *New Zealand Veterinary Journal.* 53:6. 416-422.
- McGuirk, SM. & Peek, S. (2003). Salmonellosis in cattle: a review. *Proceedings of the 36th Annual Conference of the American Association of Bovine Practitioners, Columbus Ohio.*
- West, DM et al. (2009). *Salmonellosis. The Sheep: Health, disease and production—3rd Edition.* NZVA press. 322-327.

## FOR MORE:

**Visit [TopFarmers.co.nz](https://www.topfarmers.co.nz)**

Or find us on YouTube by searching: **TopFarmersNZ**

Or visit: **[soundcloud.com/TopFarmers](https://soundcloud.com/TopFarmers)**

Or visit: **[msd-animal-health.co.nz](https://msd-animal-health.co.nz)**

MSD Animal Health  
33 Whakatiki St, Upper Hutt, Wellington, New Zealand  
Private Bag 908, Upper Hutt 5140

AVAILABLE ONLY UNDER VETERINARY AUTHORISATION.  
ACVM No: A007886. Schering-Plough Animal Health Ltd.  
Phone: 0800 800 543. [www.msd-animal-health.co.nz](http://www.msd-animal-health.co.nz) NZ/SALB/1019/0009(1)a

