Salmonellosis is a significant animal health issue for sheep (and cattle). Intensively grazed stock are most vulnerable. When disease occurs, it strikes without warning and spreads rapidly. Disease can occur in 2 forms:

- **Enteric (Gut) Salmonellosis** occurs throughout New Zealand, causing diarrhoea and death in sheep. Most common in adult sheep from early summer to the end of winter the first sign is usually death. Sick sheep are weak, listless, do not eat, are reluctant to move and are found near water, often with putrid-smelling diarrhoea that stains the wool around the hind quarters. Deaths can range from 1% to 5% in affected mobs to as high as 20% in a severe outbreak. Disease sometimes occurs in hoggets or two-tooths, but is rare in lambs.

- **Brandenburg (Abortion) Salmonellosis** occurs in the central and lower South Island, causing abortion and death in sheep. Mid to late pregnancy is the period of highest risk. During a Brandenburg outbreak, up to 15% of pregnant ewes will abort, and 50% of these ewes will die.

Besides sheep deaths, dealing with an outbreak means management changes, veterinary and labour costs, the risk of further outbreaks and the risk of disease in humans.

**What Triggers an Outbreak:** The major sources of disease are carrier animals. These carry *Salmonella* without showing signs of disease. They can excrete large numbers of bacteria in their faeces, which contaminate feed and infect other animals. When animals become ill they shed huge numbers of bacteria, massively contaminating the environment and rapidly spreading disease. The number of animals that become infected, ill or die depends on the cumulative risk factors present on your farm.

**Human Health:** Reducing disease in animals by vaccination reduces the risk to humans. Humans can easily be infected by *Salmonella* from contact with diseased animals. There is a strong relationship between farm animal outbreaks and human cases, with children the most commonly affected. The disease is debilitating, causing diarrhoea, fluid loss, dehydration and stomach cramps. Most people require immediate medical attention.

**Prevention:** *Salmonella* is always present on a farm. The aim of vaccination is to prevent infection, reduce the impact of any disease outbreak and reduce production losses. Prevention requires:

- **Risk reduction**, and as not all risk can be eliminated
- **Vaccination to control disease**, protect valuable stock and give peace-of-mind

**Control:** Any suspected case in your animals should be diagnosed by a veterinarian so that preventative measures can be undertaken. Strict hygiene must be observed during an outbreak. Mustering and yarding during an outbreak will spread the disease more rapidly.

**The Benefits of Salvexin+B**

- The only *Salmonella* vaccine for sheep and cattle
- Can be used in a targeted programme prior to the risk period for either enteric or Brandenburg disease
- Protects valuable capital breeding stock, reducing ewe deaths and the impact of a disease outbreak
- Protects against significant abortion losses caused by Brandenburg disease
- Multistrain protection against S. Hindmarsh, S. Typhimurium, S. Bovis-morbificans and S. Brandenburg
Description:
Contains inactivated Salmonella Bovis-morbificans, S. Hindmarsh, S. Typhimurium and S. Brandenburg antigens with alum as adjuvant and 0.5% w/v phenol as preservative.

Indications:
For use in sheep and cattle to stimulate active immunity against diseases caused by S. Bovis-morbificans, S. Hindmarsh, S. Typhimurium and S. Brandenburg.

Dosage:
Administered by subcutaneous injection to sheep and cattle, in the anterior (front) half of the neck.

- **Prevention of Enteric Disease:** A full preventative programme is recommended for ewes and rams. In the first year a sensitising dose followed 4–8 weeks later by a booster, prior to the anticipated danger period. In subsequent years, an annual booster is recommended, prior to the anticipated danger period. Vaccinate new stock with 2 vaccinations before introduction to the flock. If an enteric outbreak occurs in unvaccinated animals, field experience indicates vaccination as early as possible may decrease stock losses. Consult your veterinarian.

- **Prevention of Brandenburg Disease:** Sheep should be given 2 vaccinations at least 4 weeks apart before the period of greatest risk. In subsequent years, an annual booster is needed, prior to the anticipated danger period. Vaccinate new stock with 2 vaccinations before introduction to the flock. Ewes can be given:
  - the first vaccination at the start of mating and the second at the end of mating, OR
  - the first vaccination at the end of mating or early pregnancy and the second about 4 weeks later.

Due to the severity of Brandenburg disease, vaccination must be timed to give the best chance for effective immunisation of the pregnant ewe. This is in the early stages of pregnancy. It is NOT recommended to delay vaccination until the first signs of disease. This will severely compromise protection.

Dose Size:
2mL s.c.

Side Effects:
A slight reaction may occur at the site of injection but will normally disappear in a few weeks.

Special Precautions:
Avoid self-injection.

Withholding Times:
Nil.

Other Management Factors:
Consult your local veterinarian about the other management issues that may be important to prevent diseases caused by Salmonella and to limit spread if these should occur.

Pack Size:
250 dose (500mL)
or 125 dose (250mL) packs.

Other Information:
Store away from light at 2–8°C. Do not freeze.

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SALVEXIN®+B
Prevent abortions and increase lamb survivability.

**Toxovax**
Prevent inevitable losses with a single dose lifetime protection for breeding ewes.

**Androvax®-plus**
Boost lamb numbers quickly by a proven average of 20%.

**Campyvax®4**
Prevent abortions and increase lamb survivability.

The Intervet/Schering-Plough
Sheep Performance Programme:
Toxovax®, Campyvax®4,
Salvexin®+B, Androvax®-plus.

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