

If you're proud of
your stock, only the
best protection will do.



Covexin[®] 10
Superior protection for
ALL clostridial diseases.

Covexin® 10 – For farmers who look for the best from their stock

Covexin 10 is the premium clostridial vaccine for farmers who take pride in their stock, who look for the best from their stock, and want the best for their stock.

Covexin 10 is the premium clostridial vaccine for farmers of:

- ▶ Stud, pedigree and/or stock of high genetic value.
- ▶ Stock reared on high input farm systems (i.e. high levels of supplementary feed).
- ▶ Top producing herds/flocks.
- ▶ Fast growing stock.
- ▶ Stock with increased clostridial 'risk factors'.

Covexin 10 is everything a premium clostridial vaccine should be.

Total clostridial protection.

Covexin 10 represents a breakthrough in clostridial vaccination.

By including **10 key clostridial pathogens**, Covexin 10 provides unsurpassed coverage against clostridial diseases.

The combination of the most relevant clostridial pathogens with the latest vaccine production technologies has resulted in a superior product that addresses the needs of both **cattle and sheep** farmers.

Thorough clostridial protection

Protection for young to mature animals.

The first weeks of life of an animal are especially risky for the development of certain clostridial diseases; it is essential to protect animals during this time.

Lambs and calves can be vaccinated with Covexin 10 from as young as 2 weeks of age.

Long-lasting protection.

Vaccination with Covexin 10 protects the vaccinated animal for a period of at least 12 months.

Passive immunity.

Vaccinating pregnant animals during the 2–6 weeks prior to lambing/calving transfers immunity via the colostrum to the newborn animals shortly after birth. This will protect the young animals for a period of 8–12 weeks.

Dose volume.

The dose volume is:

- ▶ 1 mL for sheep
- ▶ 2 mL for cattle.

The volume does not change with the age or size of the animal, making it considerably easier to plan the flock/herd vaccination.

Vaccination schedule.

Two doses are required in previously unvaccinated animals; a sensitiser followed by a booster 4–6 weeks later. An annual booster is then required.

For maximum protection in breeding ewes and cows, vaccinations should be timed so that the booster dose is given approximately two weeks prior to lambing/calving.

Vaccination schedule

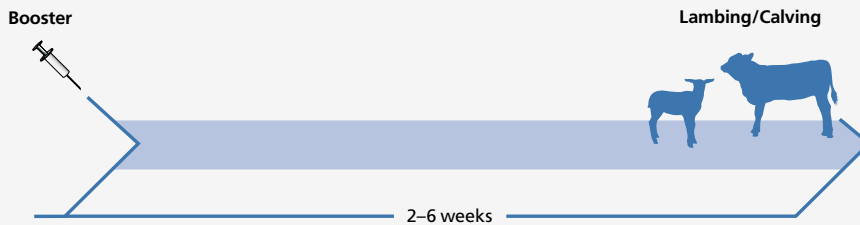
Lamb and calf from unvaccinated ewe/cow



Lamb and calf from vaccinated ewe/cow



Pregnant ewe/cow



The 10 deadly names in clostridial diseases

1. Tetanus.

Tetanus is caused by a deadly neurotoxin by *C. tetani*. The bacteria often gain access to the animal via a skin wound.

2. Blackleg.

Blackleg is caused by *C. chauvoei*, and is the most important clostridia in New Zealand cattle.

3. Malignant oedema.

This highly fatal disease is primarily caused by *C. septicum* and tends to occur in older animals.

Specific risk factors for Tetanus, Blackleg and malignant oedema:

Localised necrosis and wound infection from injuries, often incurred due to yarding, fighting, marking, castration lambing, calving, surgery, teething or injection.

4. Black disease.

Black disease is usually caused by *C. novyi* and is associated with liver damage in cattle or sheep. Most affected animals are found dead with no other clinical signs.

5. Bacillary haemoglobinuria.

Also known as 'Red water', *C. haemolyticum* infects cattle and sheep after ingestion of spores via contaminated food and water.

Specific risk factors for Black disease and 'Red water':

Any necrotic process in the liver; from a rumenitis, migration of immature liver fluke, hepatotoxins (fungal toxins such as sporidesmin), trauma (yarding, fighting, etc) or liver biopsy.

6. Sudden Death Syndrome.

C. sordellii and *C. perfringens* Type A are associated with sudden death in cattle.

7–10. Enterotoxaemia (e.g. Pulpy Kidney).

C. perfringens Types A, B, C and D are the most widespread clostridial bacteria. Pulpy Kidney, the most common cause of death in lambs before weaning, is caused by toxins produced by *C. perfringens* Type D.

Specific risk factors for Sudden Death Syndrome and Enterotoxaemia:

Bacterial multiplication in the gut – dietary changes, highly nutritious diets, crop feeding. High growth rates.

10 points for complete protection

- ▶ Broad protection against 10 clostridial diseases.
- ▶ 12 months duration of active immunity.
- ▶ 12 weeks duration of passive immunity.
- ▶ Low dose volume.
- ▶ Simple vaccination protocol.
- ▶ Can be used from 2 weeks of age.
- ▶ Efficacious in the presence of maternally derived antibodies.
- ▶ For cattle and sheep.
- ▶ Culmination of clostridial vaccine development.
- ▶ From the clostridial vaccine experts.

Prescription Animal Remedies (P.A.R) Class I. For use only under the authority or prescription of a veterinarian. Registered pursuant to the ACVM Act 1997, No: A9028, contains inactivated toxoids of *Clostridium perfringens* (types A, B, C and D), *C. novyi* (type B), *C. septicum*, *C. tetani*, *C. sordellii*, and *C. haemolyticum* and inactivated whole cell culture of *C. chauvoei*.

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