If they’re proud of their 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 clostridial vaccine of choice for farmers who are either breeding superior quality animals, or who farm intensively for high level production.

Covexin 10 is the 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’.

Premium clients expect and deserve a premium vaccine. 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.
The 10 deadly names in clostridial diseases

1. Tetanus.
Tetanus is caused by the release of a deadly neurotoxin by *C. tetani*. Deaths can occur in livestock of any age, but are most common in lambs. The bacteria often gain access to the animal via a skin wound.

2. Blackleg.
Blackleg is caused by *C. chauvoei*, and is normally seen in cattle under 12 months of age. It is the most important clostridia in New Zealand cattle, and appears to be endemic on some farms.

3. Malignant oedema.
The primary cause of malignant oedema is *C. septicum*, but other clostridia may also be involved. This highly fatal disease tends to occur in older animals and is characterised by rapid autolysis.

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.

Black disease is associated with liver damage in cattle or sheep. The condition is usually caused by *C. novyi*. Most affected animals are found dead with no other clinical signs. The bacteria are widespread in New Zealand soils and the disease is endemic on some farms.

5. Bacillary haemoglobinuria.
The cause of 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. These organisms are readily isolated from the organs and intestinal tracts of animals, however the main habitat and source of infection is considered to be the soil. *C. sordellii* is also associated with haemorrhagic enteritis in cattle.

7–10. Enterotoxaemia (e.g. Pulpy Kidney).
*C. perfringens* (Types A, B, C and D) are the most widespread clostridial bacteria. All can be found in the intestinal tract of livestock. Pulpy Kidney, the most common cause of death in lambs before weaning, is caused by toxins produced by *C. perfringens* Type D.

Organism | Disease | COVEXIN 10 | Traditional 5 in 1
--- | --- | --- | ---
*C. tetani* | Tetanus | • | •
*C. chauvoei* | Blackleg | • | •
*C. septicum* | Malignant oedema | • | •
*C. novyi* | Black disease | • | •
*C. haemolyticum* | Red water | • | •
*C. sordellii* | Sudden Death Syndrome | • | •
*C. perfringens* Type A | Sudden Death Syndrome | • | •
*C. perfringens* Type B | Lamb Dysentery | • | •
*C. perfringens* Type C | Enteritis | • | •
*C. perfringens* Type D | Pulpy Kidney | • | •

Specific risk factors for Sudden Death Syndrome and Enterotoxaemia:
- Bacterial multiplication in the gut – dietary changes, highly nutritious diets, crop feeding. High growth rates.
Thorough clostridial protection

Covexin 10 is proof that the most thorough protection against clostridial disease can also be easy to administer. Covexin 10 simplifies farm management thanks to its year-round, long-lasting protection, suitability for early vaccination and low dose volume.

Protection for young to mature animals.

Defining a farm’s clostridial vaccination programme requires knowledge of the main risk periods (feeding changes, access to contaminated pasture, certain management procedures, etc) and an understanding of the immune system of the animals concerned.

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. Older animals can also be highly vulnerable to clostridial diseases.

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

Long-lasting protection.

Vaccination with Covexin 10 induces an active immunity that protects the vaccinated animal for a period of at least 12 months. The long duration of immunity of Covexin 10 ensures that vaccinated animals are protected all the year round and simplifies management procedures on the farm.

Passive immunity.

Vaccinating pregnant animals during the 2–6 weeks prior to parturition 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.

Covexin 10 has been proven efficacious in the presence of maternally derived antibodies. It is recommended that animals with unknown colostrum status be vaccinated from 2 weeks of age. Those animals from vaccinated mothers and with confirmed colostrum intake should be vaccinated at 8–12 weeks old.

Dose volume.

The sophisticated manufacturing process used for Covexin 10 enables a low dose volume for both cattle and sheep. The dose volume is 1mL for sheep and 2mL 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 parturition.

Covexin 10 can be administered concurrently with Leptavoid®.

A practical vaccination programme covering clostridial risks and leptospirosis compliance in dairy heifers can be carried out with co-administration of Covexin 10 and Leptavoid. Examples of concurrent programmes include starting at disbudding or from 3 months of age.
Covexin® 10 – 10 points for complete protection

1. Broad protection against 10 clostridial diseases.
2. 12 months duration of active immunity.
3. 12 weeks duration of passive immunity.
4. Low dose volume.
5. Simple vaccination protocol.
6. Can be used from 2 weeks of age.
7. Efficacious in the presence of maternally derived antibodies.
8. For cattle and sheep.
9. Culmination of clostridial vaccine development.
10. From the clostridial vaccine experts.

2009 Covexin 10 campaign resources

Marketing tools to increase the momentum for Covexin 10 over the coming months.

Press campaign
Press advertisement will appear in regional and national rural publications.

Covexin 10 brochure
Key Covexin 10 information for cattle and sheep farmers.