Fast-growing animals, especially those grazing redeveloped pasture, intensive feed systems (Lucerne, chicory or high sugar grasses), or switching to supplements or crops, are at high risk of sudden death syndrome. With the current focus on increasing growth rates through both improved genetics of stock and the use of new types of feed, this means that stock are more valuable and losses are more costly.

‘Sudden death syndrome’ describes these unexplained deaths. They are often very difficult to diagnose, other than clinically they are often the best stock found dead.

**POSSIBLE CAUSES OF SUDDEN DEATH IN SHEEP:**

- Clostridial diseases (including tetanus, pulpy kidney and ‘sudden death syndrome’
- Bloat / redgut
- Toxic plants
- Lead poisoning (other heavy metals)
- +/- Viral pneumonia
- Accident/trauma
- Acute Salmonella

There are other causes of deaths such as parasitism, but most often these animals show symptoms before dying. They are not usually just found dead in the paddock. Annoyingly with clostridial disease, the animals with the best growth rates and hence the best individuals, are often the ones found dead! It’s not often the tail-end ones.

**DO YOU:**

- Have any unexplained sudden deaths, especially in young fast-growing stock? (even despite using traditional 5 in1 vaccines)
- Excellent growth rates?
- Send replacements away on grazing schemes for high growth rates?
- Use lucerne, chicory or high sugar grasses?
- Feed stock on crops?
- Supplementary feed with grain, nuts, etc?

If you have answered yes to any of these, then your sheep may be at risk of clostridial diseases. Increasingly we hear of sudden death from clostridial diseases not covered by traditional 5 in1 vaccines among young fast-growing animals. This is often due to the problematic *C. sordellii* and *C. perfringens* Type A.

**CLOSTRIDIUM PERFRINGENS TYPE A**

In New Zealand, a survey isolated *C. perfringens* (mostly Type A) from soil over a wide range of sites in pastures, gardens, swamps, orchards, and roadsides (Bacon cited by Gardner 1990). Furthermore, it is virtually impossible to find mature cattle or sheep in New Zealand that are serologically negative to Type A (O’Connell 2002).

The most common and well recognised disease process associated with *C. perfringens* Type A is sudden death syndrome of sheep and cattle.
**WHAT CAN BE DONE?**

Vaccination with Covexin® 10 provides protection against these puzzling and annoying deaths. This is the premium clostridial vaccine for farmers of:

- Stud, pedigree and/or stock of high genetic value
- Stock reared on high in-put farm systems (i.e. high levels of supplement feed)
- Top producing herds/flocks
- Fast-growing stock
- Stock with increased clostridial “risk factors”.

This vaccine, researched, developed and manufactured in New Zealand gives cover against 10 clostridial organisms, including the problematic \( C. sordellii \) and \( C. perfringens \) Type A implicated in the sudden deaths.

A low dose volume (1ml for sheep), irrespective of age or size, results in protection that lasts at least 12 months, making it considerably easier to plan flock vaccination.

As the first weeks of an animal’s life are especially risky, if no maternal protection is available through prelamb vaccination and colostral immunity, lambs can be vaccinated from as young as 2 weeks of age.

**SUGGESTED VACCINATION PROGRAMME:**

<table>
<thead>
<tr>
<th>1st vaccination</th>
<th>2nd vaccination</th>
<th>Annual booster</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lambs from unvaccinated ewes</strong></td>
<td>From 2 weeks of age (or at tailing)</td>
<td>4-6 weeks later (or at weaning)</td>
</tr>
<tr>
<td><strong>Lambs from vaccinated ewes</strong></td>
<td>8-12 weeks of age (weaning)</td>
<td>4-6 weeks later</td>
</tr>
<tr>
<td><strong>Pregnant ewes</strong></td>
<td></td>
<td>2-6 weeks prelambing. This should protect lambs until 8-12 weeks of age (weaning)</td>
</tr>
</tbody>
</table>

**EXAMPLE OF ON FARM USE:**

Covexin 10 was featured strongly at a recent beef and lamb monitor farm programme on “lucerne for lambs”, in South Canterbury. The farm had been suffering losses of ewes on clover and lucerne, and after discussing with their vet who thought the problem was clostridial, started vaccinating with Covexin 10. This reduced the deaths to next to nothing.