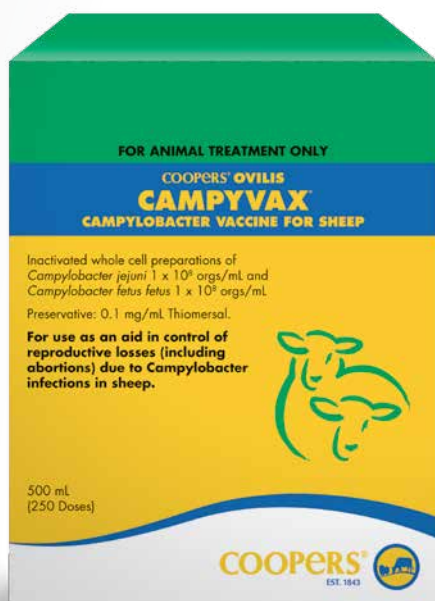


CAMPYLOBACTER INFORMATION GUIDE

*Campylobacter is the
leading cause of abortion
in Australian sheep*



COOPERS® Ovilis
CAMPYVAX®

*The only
Campylobacter vaccine
for sheep*

Campylobacter is reducing lamb marking percentages across Australia^{1,2}

Campylobacter, a bacterium that causes late term abortions and still births in lambs, is more common than Australian sheep producers think. In fact, extensive testing over the last three years has found that a vast majority of farms are infected with one or both strains of *Campylobacter*².

What is the impact of Campylobacter?

Campylobacter can cause significant losses in your flock. Extensive blood sampling can confirm that **2/3** of farms tested are affected by the main abortion causing strain².

On farms where *Campylobacter* is present, hidden lamb losses average **9%**³. If you have an abortion storm caused by *Campylobacter*, you may see losses of up to **40%**⁴.

Facts

- *Campylobacter* is the most common cause of abortions in sheep¹.
- *Campylobacter* is a bacterial infection – *C. fetus fetus* is commonly associated with abortions in sheep. *C. jejuni* is found in most Australian sheep and is also known to cause lamb abortions.
- Reports from the MLA and other sources show lamb losses from *Campylobacter* average 9%^{2,3,4}.
- Maiden ewes are often naive to *Campylobacter*.
- You may not know you have *Campylobacter* on your property.
- You may not see foetuses on the ground – just a reduction from scanning to lamb marking.

Signs

- Abortions and stillborn lambs.
- Weak or unviable lambs.
- Blood stained breaches.
- Poor scanning to marking percentage.
- Large gap between maidens and the main flock.
- Many aborting ewes show no signs of ill-health and recover.

Questions to ask yourself

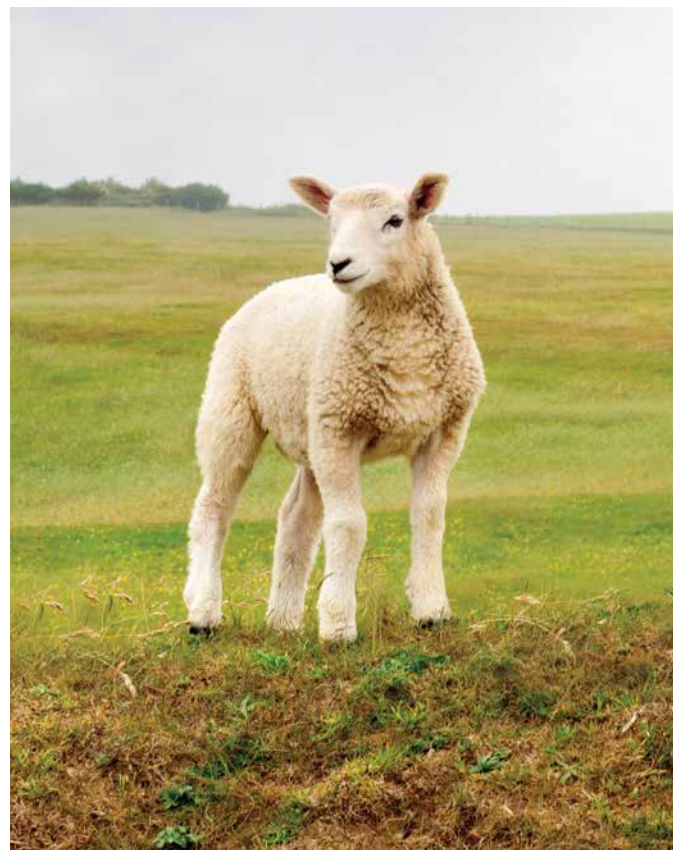
1. Is there a noticeable gap between your scanning and marking?
2. Are your maidens marking fewer lambs than your older ewes?
3. Are your marking percentages lower than the district norm?
4. Have you noticed any abortions, still-births or weak lambs?
5. Have you seen any blood stained breaches at shearing or crutching?

If you answer 'yes' to any of these questions, you may have *Campylobacter* on your property.

Remove the doubt – test your flock

Coopers® can blood test farms for the presence of *Campylobacter* bacteria. It's recommended to target maiden ewes that have lost lambs post scanning.

To find out more about *Campylobacter* blood testing, talk to your local Coopers representative.



“With Campyvox[®], our lambing rates in our maiden ewes have improved from 50% to 75 %, which is fantastic.”

Jay Weston



Monaro NSW

Infection and spread

Campylobacter bacteria can be present in the intestines of healthy sheep and can be spread in the faeces, particularly during periods of stress⁵. This leads to contaminated pastures and water sources and the ingestion of the bacteria by previously unexposed sheep. There is no way of detecting ‘carrier’ sheep and these sheep will be healthy and productive. Infection causes the biggest impact if the sheep is pregnant at the time of initial exposure – potentially leading to abortions, stillbirths or weak non-viable lambs.

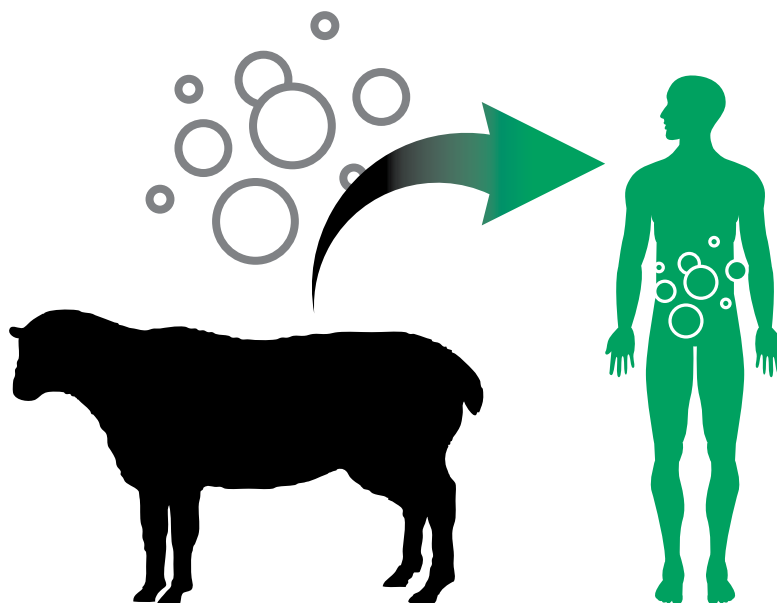
Contamination from uterine fluids and discharge, post abortion or birth, is very significant in the disease process. This contamination can lead to an outbreak of infection and abortions within a flock, often described as an abortion storm. Ewes can excrete high levels of bacteria in uterine discharge for up to 6 weeks. Cows and foxes can also excrete the bacteria in their faeces for weeks following ingestion.

Zoonotic disease

Campylobacter is a very common cause of bacterial gastroenteritis in humans worldwide⁶.

Campylobacter can also infect immunocompromised people and may cause bacteraemia.

Always wear disposable gloves and cover cuts and abrasions before handling aborted or potentially contaminated material. Always wash hands, change and wash clothes, and disinfect shoes and equipment after handling contaminated material.



Geographic prevalence

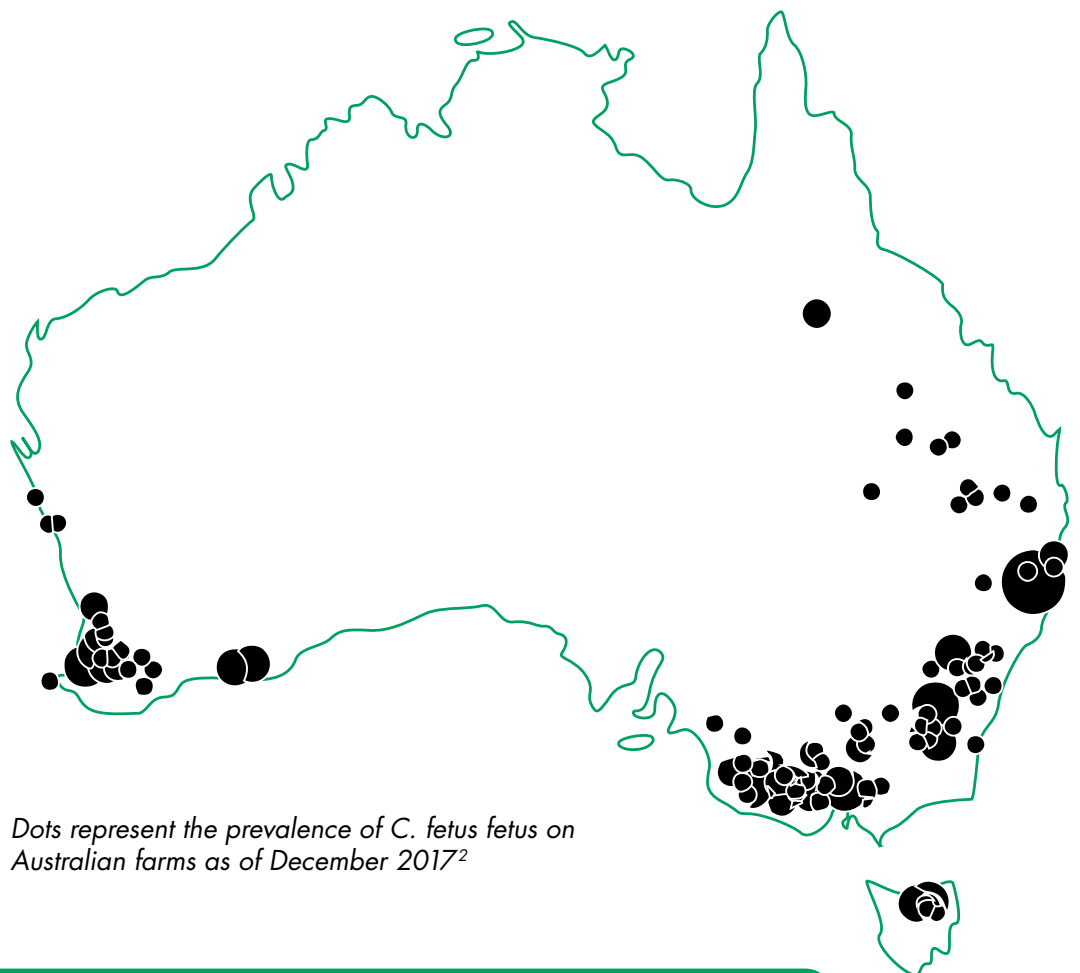
In the past, reproductive losses in sheep due to infection with *Campylobacter* were found in regions where cool, moist climatic conditions prevailed, such as higher rainfall areas of Victoria, Tasmania and southern parts of New South Wales.

Since a new blood test was made available in 2014 to determine the serological prevalence of *Campylobacter fetus fetus* and *Campylobacter jejuni*, there is clear evidence that reproductive losses due to *Campylobacter* are much more widespread within Australia than previously thought².

Results so far indicate farms in drier mixed farming and pastoral areas are affected by *Campylobacter* infection. Farms in Queensland and Western Australia, where previously *Campylobacter* infection was not considered an issue, have been found to have exposure to both *C. fetus fetus* and *C. jejuni*².

Coopers testing has found *C. jejuni* at levels likely to be associated with abortions, and *C. fetus fetus* at levels associated with abortion in two thirds of flocks tested².

Abortion storms are usually associated with *C. fetus fetus*, especially in the last 6 weeks of pregnancy⁷.



Dots represent the prevalence of *C. fetus fetus* on Australian farms as of December 2017²

Almost 100% of farms tested positive to Campylobacter².

2/3 of farms tested were affected by the main abortion causing strain².

How do I know if my farm is affected by Campylobacter?

Considering blood test results from across the country, there's a high chance *Campylobacter* is lurking on your property. In recent studies, over 95% of flocks were found to be exposed to *C. jejuni*. When it comes to *C. fetus fetus*, the main abortion causing strain was found to be affecting up to two thirds of properties tested².

If your property has unexplained losses between scanning and marking, low marking percentages, signs of abortion, blood stained breeches, or dramatically lower marking percentages in maiden ewes – *Campylobacter* could be the cause.

“Campylobacter is a big cause for concern – it is a silent killer as you simply don't know it is there.”

James Evans



Williams WA

Pregnancy scanning – know your numbers to secure your gains

The key advantages of pregnancy scanning your ewes include:

- Measure conception rates and diagnose multiple pregnancies for targeted management.
- More accurate measurement of any lamb losses between scanning and marking.
- A reference point from where lambing percentages can be accurately assessed.

Which ewes should you vaccinate?

Due to the high prevalence and risk of *Campylobacter* exposure, it may not be a case of only vaccinating your maidens. The following situations may benefit from vaccinating the whole flock with Campyvax.

- All studs should vaccinate to protect high value stock.
- Commercial producers may benefit from vaccinating the whole flock due to the importance of high reproductive rates.
- Vaccination is vital in situations where stocking rates are high and abortion storms are more likely, such as intensive rotational grazing or containment feeding.
- Producers who supplement feeding during pregnancy should consider vaccination, due to the high stocking environment and higher than normal faecal contamination.
- Based on testing results, if your flock has low levels of exposure, it may be advisable to vaccinate the entire flock as you could be at risk of an abortion storm.

“Since introducing the Campyvax vaccine to our farm, we have seen a 20 percent increase in the maidens.”

Scott Norton



Shellford VIC

CAMPYVAX

The only Campylobacter vaccine for sheep

What is Campyvax?

Campyvax is the only pre-joining vaccine that helps control reproductive losses due to *Campylobacter* species in Australian sheep. It aids in the control of both strains of *Campylobacter* – *C. fetus fetus* and *C. jejuni*.

Campyvax offers sheep producers a vaccination option where *Campylobacter* is identified or suspected as causing potential production problems.

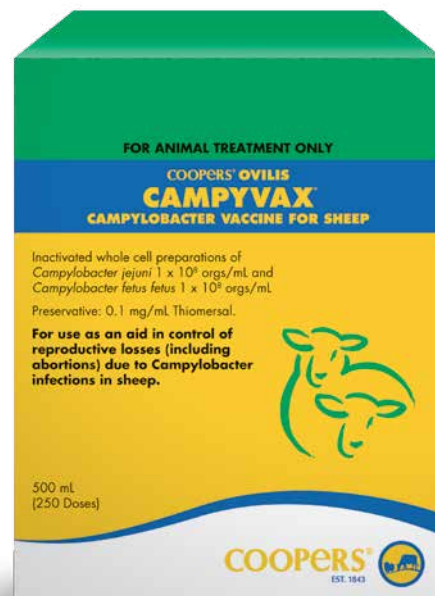
What are the benefits of using Campyvax?

Helping control *Campylobacter* may improve lambing percentages by:

- Reducing lamb abortions caused by *campylobacter*.
- Reducing still births caused by *campylobacter*.
- Reducing weakened lambs caused by *campylobacter*.
- Reducing transiently infected ewes.
- Reducing ewes with secondary infections post abortions caused by *campylobacter*.
- Reducing the risk of abortion storms in naive flocks.

A recent survey showed that Victorian farmers who vaccinated maidens with COOPERS CAMPYVAX had an average marking percent increase of greater than 10%⁸.

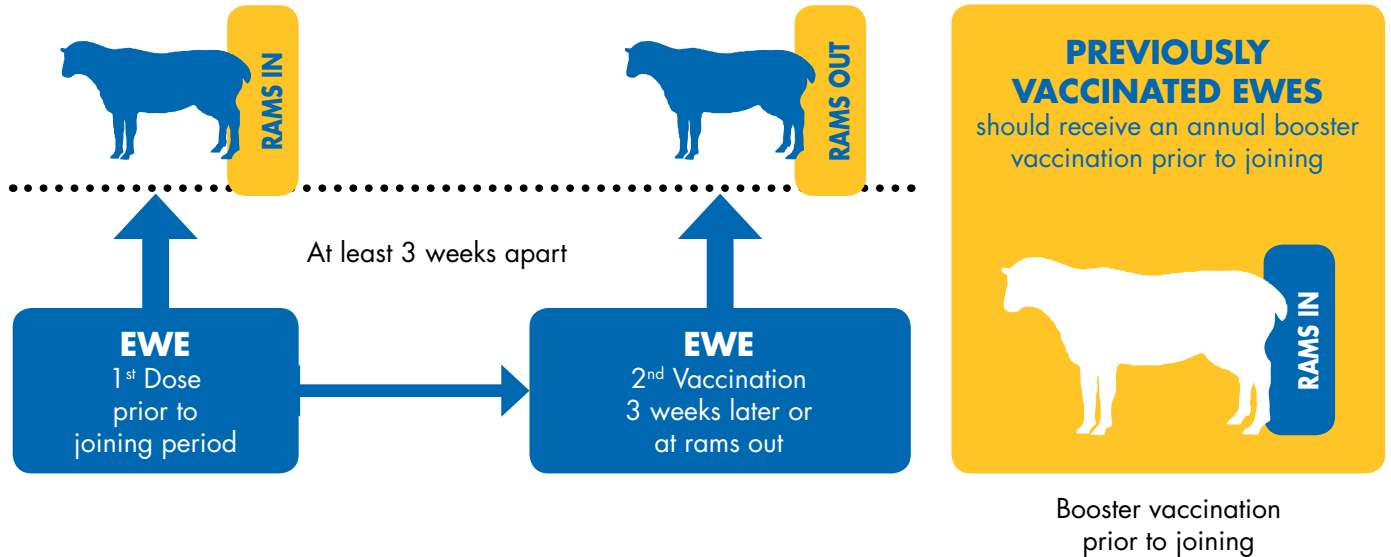
COOPERS® OVILIS **CAMPYVAX**[®] CAMPYLOBACTER VACCINE FOR SHEEP



CAMPYLOBACTER INFORMATION GUIDE

Application and timing

Campyvac is a 2 mL subcutaneous vaccination that is given high up on the neck behind the ear. Unvaccinated ewes should receive a sensitiser vaccination prior to joining and a booster dose a minimum of three weeks later.



Where *Campylobacter* is likely to be causing reproductive losses in ewes, it is very important to ensure ewes are protected at a strategic time to ensure optimal immunity to disease.

This is because there is no proven treatment available to reduce the impact of an abortion storm caused by *Campylobacter* when it is occurring; apart from antibiotic therapy of at risk ewes (where a vet has prescribed this) and the efficacy of this is uncertain.

Independent trials where vaccination was given during pregnancy and compared to non-vaccinating groups have shown no effect on scanning results.



Storage and handling

- Always store Campyvac in the fridge at 2 - 8°C. Do not freeze.
- Protect from light.
- Shake well to mix before use and keep mixed during use.
- Do not expose directly to heat and light during use and use an insulated container to protect the vaccine if required.
- Use all product within 12 hours of opening.
- Always take care when vaccinating stock.

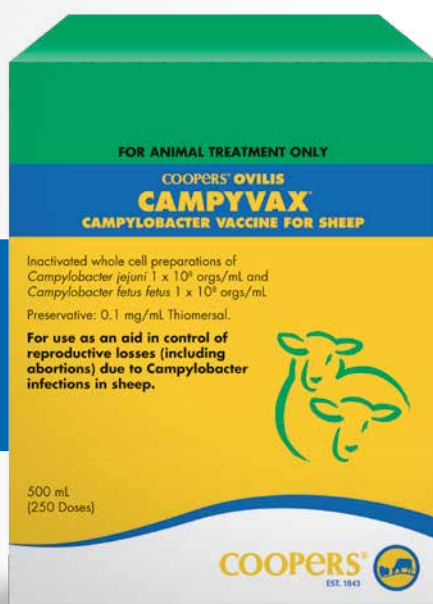
Campyvac is an oil emulsion vaccine and extreme caution should be used when injecting to avoid injecting yourself. Accidental self-inoculation may cause inflammatory reactions or allergic response which requires correct medical management. Medical advice should be sought as soon as possible in the event of self-inoculation.

“Since using Campyvax, our lambing has increased by 20% in our last check which has been great.”

Luke Edwards



York WA



COOPERS® OVLIS
CAMPYVAX
CAMPYLOBACTER VACCINE FOR SHEEP

TOLL FREE 1800 885 576

www.coopersanimalhealth.com.au

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