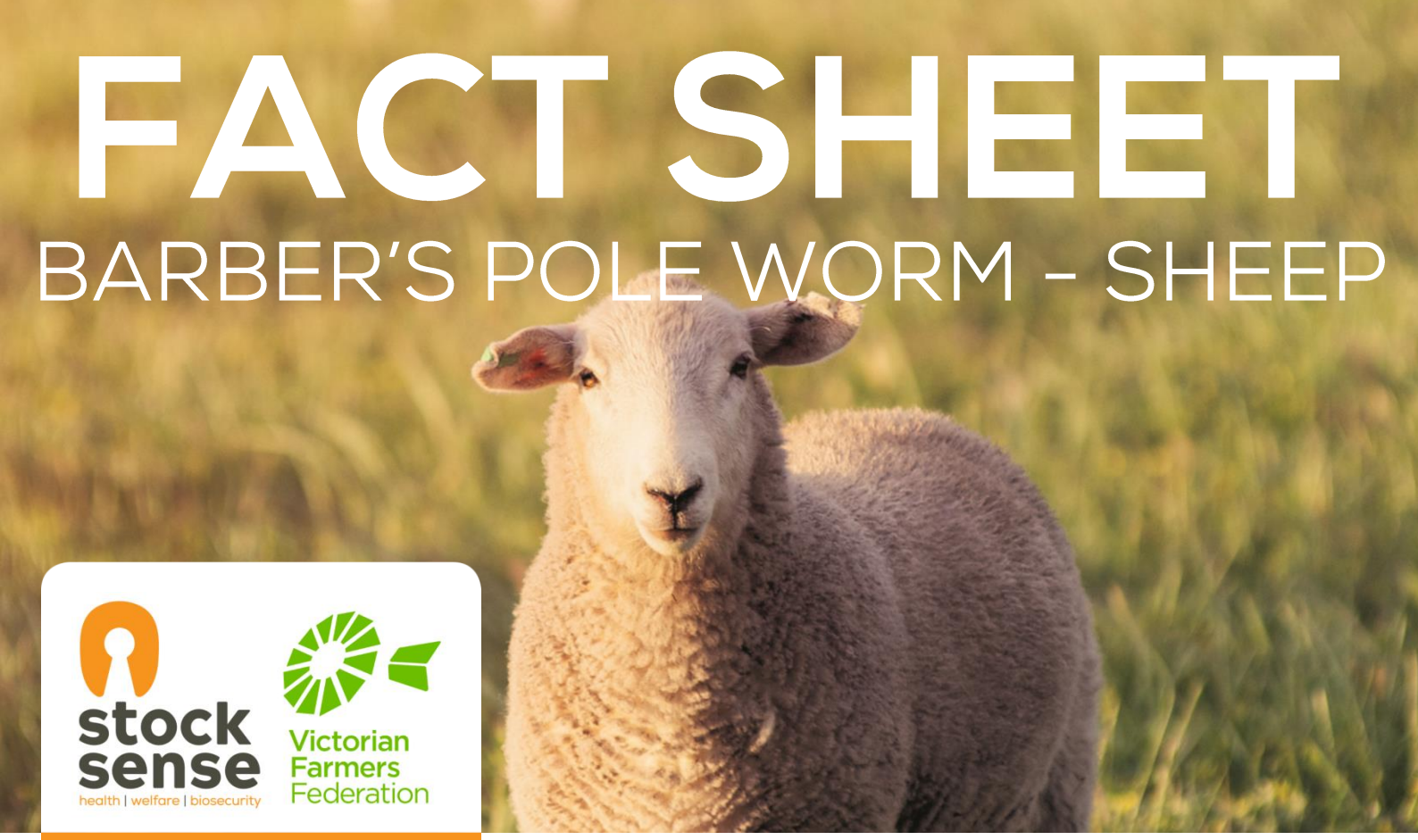
FACT SHEET

BARBER'S POLE WORM - SHEEP



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WHAT IS BARBER'S POLE WORM?

The barber's pole worm (BPW) (*Haemonchus contortus)* can be a cause of mortalities in sheep within summer rainfall zones like the New England Tablelands of New South Wales. Over many years similar issues have arisen from BPW across Victoria, which are associated with rainfall or moisture across summer and early autumn. In wet summer years the numbers can build up quickly especially in young sheep.

BPW are prolific egg layers and in moist, warm conditions their numbers can build up rapidly.

A BPW female can lay 5,000 to 10,000 eggs per day which is around 50 to 300 times more than our winter scour worms. When conditions are ideal, development to infective larvae can be as quick as 4 to 6 days. BPW eggs require daily maximum temperatures of at least 16-18°C, so there is little development from May to early September in most parts of Victoria.

IMPACTS

The blood sucking BPW lives in the fourth stomach (abomasum) and is easy to identify due to a blood filled intestine wrapped around the white reproductive organs of the female worm. Heavily infected sheep can lose up to 250mL of blood (5-10% blood volume) per day. In the New England it is not uncommon for mortalities to reach 10% of young stock and 6% across the flock.

The main losses caused by BPW are deaths of affected sheep. There is often little in the way of subclinical production effects, as opposed to "scour worms" where appetite suppression in subclinical cases are a major cause of production loss.

CLINICAL SIGNS

Animals in early stages of infection show little in the way of clinical signs. As the blood loss associated with the worms increases signs can include; "bottle jaw", anaemia, collapsing or dropping back from the mob when driven, and death. In pure infections of BPW there is usually no scouring but on farm there can be mixed infection with "scour worms". In Victoria conditions that are ideal for BPW are often also ideal for scour worms and chronic heavy infections of scour worms can also cause bottle jaw and anaemia.

DIAGNOSIS

A tentative diagnosis of BPW will often be made based on previous history, clinical signs and very high worm egg counts numbering in the thousands. The eggs of BPW are indistinguishable from other worm eggs.

A BPW diagnosis is confirmed based on clinical signs and a differential worm egg count, or a post mortem examination with a total worm count.

Larval differentiation (diff)/speciation or PCR, is required to identify different species of worms contributing to the egg count. A larval diff or PCR will give you a percentage of each type of worm present and this will help you make better informed drench decisions. Because BPW are such prolific egg layers that worm egg counts reach normal drench trigger points even with low levels of BPW, resulting in unnecessary drenching in what maybe a subclinical infection.

BPW larvae will start to consume blood before they are able to lay eggs, so in situations with severe pasture contamination, sheep may die before eggs counts rise and this can occur soon after drenching.

SAFE PADDOCK

BPW produce large numbers of comparatively fragile eggs which require specific warm moist conditions to develop into infective larvae. Eggs won't become larvae unless the daily maximum temperature is greater than 18°C and either soil moisture is high or 10-15mLs of rain occurs within five days of deposition. The survival of the larvae on pasture varies with temperature and moisture. In autumn, winter and early spring it may take around 6 months for 90% of BPW larvae to die but in summer this time may be reduced to six weeks of hot, dry weather.

DRENCHES

BPW are notorious for rapidly developing resistance in areas like the New England. In Victoria the resistance situation varies between farms, depending on the source of stock and drench use history. It is always worth checking to make sure your drenches have worked.

Closantel is a narrow spectrum drench with specific and sustained (28 days) activity against BPW.

Moxidectin oral will give two weeks sustained activity against BPW, the injectable Moxidectin based vaccines will give 21 days, and the long acting moxidectin injection will give around 91 days protection.

TREATMENT

Treatment of acute cases will require knowing what species of worm you're dealing with and whether there is a "safe" paddock to move the affected sheep to after drenching. If a safe pasture is available, drench on to that pasture with short acting product. If no safe pasture exists a longer acting product may need to be used to prevent immediate reinfection.

If it is predominately a BPW worm problem, then a narrow spectrum long acting product like closantel or short acting napthalaphos (Rametin) could be used, depending on the availability of a safe paddock.

TAKE HOME MESSAGES:

- Barber's pole worm can cause sheep losses during wet, green summers in Victoria.
- Worm numbers can rapidly build up under ideal conditions over summer and early autumn
- Worm egg counts with larval diffs to identify which worms are present, are key to sensible drench decisions.

QUARANTINE DRENCHING

It is important to prevent the introduction of resistant BPW onto your property. For all sheep brought in it is important to follow the standard protocol of: using a 4 way drench, emptying out in the yards on arrival, grazing a "wormy paddock" and checking the drench has worked 10-14 days after arrival.

GRAZING STRATEGIES

BPW eggs and larvae have specific requirements that allow grazing strategies to be very successful in reducing the worm burden on farm and reliance on chemical control. High intensity rotational grazing, preparing low risk paddocks through smart grazing or strategic use of medium to long acting products, are all highly effective at reducing pasture contamination if performed correctly.

For further information, please contact Stock Sense on 1300 020 163 or email stocksense@vff.org.au.

FURTHER LINKS

Worm Boss, Barber's Pole Worm
http://www.wormboss.com.au/worms/roundworms/barbers-pole-worm.php

Worm Boss, Worm Control Program
http://www.wormboss.com.au/programs/sheep/vic.php

Worm Boss, Grazing Management
http://www.wormboss.com.au/tests-tools/management-tools/grazing-management.php

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