

Footrot on KI update.

Across South Australia the spring of 2020 provided ideal conditions for the bacteria *Dichellobacter nodosus* to express as the disease footrot (FR) in sheep and goats. On Kangaroo Island these conditions continued well into the summer. The combined effects of ideal weather conditions, the chaos of stock movements during the fires and mass restocking has resulted with double the number of virulent FR detections compared to previous years.

Hidden costs to producers' profits:

- In a controlled two year experiment undertaken in NSW, the mean body weight of merino wethers was 11.6% lower in a mob of FR infected stock compared to an uninfected control group.¹ For a 75kg wether a drop of 11% body weight equates to: 8.25kg per head (2.23% drop in dressing weight/head). The equivalent of a merino wether valued at \$180 at 75kg with FR would equate 66.75kg and \$160.20/head, overall, in a 4000 head enterprise this would equate to a production loss of **\$80,000.00**.
- In the same experiment FR also depressed wool growth by 0.4kg/8% per wether per year. *For a 4000 head merino wool producer a 0.4kg wool loss/head equates to a total loss of 1.6Tonne of wool per annum.* Based on 5kg end yield fleece weight of 21 micron wool valued at 1277ac/kg a loss of 0.400g per head from a flock of 4000 would result with an annual loss of **\$20,432.00 in wool sales**, for 18 micron wool at 1913ac/kg the loss is greater at **\$30,608.00**.
- Footrot is a notifiable disease with serious animal welfare implications, there are movement restrictions imposed on flocks affected with footrot. Stock with virulent FR can only be sold direct to slaughter or to an approved feedlot in SA. Therefore, the sales options for producers with stock infected with virulent FR are limited compared to non-infected flocks and premium markets may not be accessible.

These are hidden profit losses that enterprises with FR may not be aware they are experiencing. When considering the annual losses to production the cost of running an eradication program should also be weighed up.

Cost to Eradicate FR:

Some contractors charge around \$10/head to run a footrot eradication program, if we add an extra \$2.50/head for treatment materials (vaccination or antibiotics and foot-bathing etc) then at \$12.50/head the estimated eradication cost for a 4000 head flock is roughly **\$50,000.00**.

Other financial variables that have not been considered in the eradication costs mentioned above are highly variable and dependent on individual enterprises. These variables can include costs associated with the need for possible fencing improvements and/or costs associated with cull animals and replacement stock.

Costs of Annual control measures:

Effective control needs to be undertaken during every spread period to reduce the severity of lesions and improve animal welfare. Control can be achieved through foot paring followed by foot bathing, vaccination, antibiotics, or a combination of these controls. In 2006 MLA

¹ Marshall DJ, Walker RI, Cullis BR, Luff MF. The effect of footrot on body weight and wool growth of sheep. Aust Vet J. 1991 Feb;68(2):45-9. doi: 10.1111/j.1751-0813.1991.tb03126.x. PMID: 2025200.

estimated the cost to control footrot in an endemic flock to be \$3.54 per head, with inflation this rounds to \$4.78/head². For a 4000 head flock the estimated cost is: **\$19,120.00** per annum.

Take home message:

- From a financial perspective, it is reasonable to conclude that successfully eradicating FR can have a significantly positive impact of the future profitability of a livestock enterprise.
- A successful program requires attention to detail and a professionally trained eye, for this reason, before embarking on an eradication program, seek professional assistance.

For assistance to develop a property disease management plan or for recommendations to find footrot contractors please contact the Animal Health team at the Kingscote PIRSA office on 08 8553 4949.

² Final report, Animal Health and Welfare: Assessing the economic cost of endemic disease on the profitability of Australian beef cattle and sheep producers. Meat and Livestock Australia Ltd, 2006, ISBN: 1741910021