

Fleece rot and lumpy wool are not the same

How to identify each for their successful management

Don't be confused!

It is important that fleece rot should not be confused with lumpy wool (the latter is also known as mycotic dermatitis or 'dermo'), because there are differences when it comes to the prevention and control of each of them. Both can lead to body flystrike because the damaged skin and fleece:

- attract pregnant female blowflies and encourage them to lay eggs
- provide moisture for eggs to hatch
- provide protein for blowfly larvae to feed on.

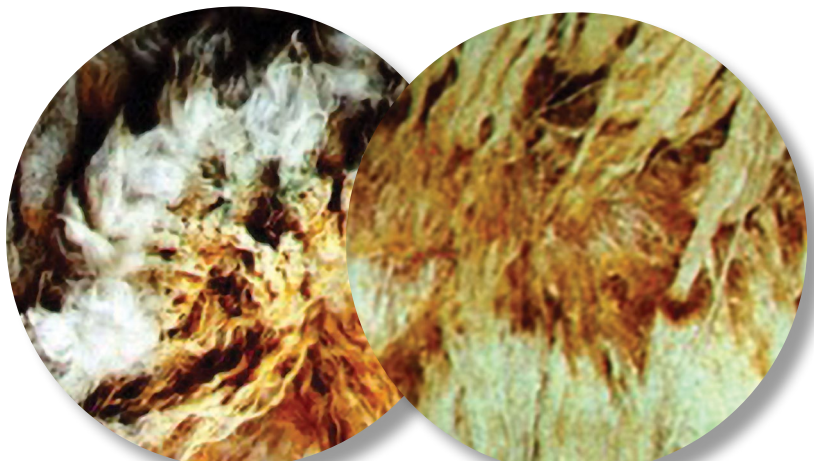
Fleece rot and lumpy wool are both skin diseases of sheep that are mostly likely to occur in high rainfall seasons. In mild cases they can easily be mistaken for each other. This article will help you identify both diseases, and provide you with information on the prevention, control and treatment of each of them.

FLEECE ROT



Fleece rot infection often results in a staining of the wool and forms flaky or matted bands of wool fibres parallel to the skin.
Source: ParaBoss

LUMPY WOOL



Lumpy wool tends to form columns of hard lumps along the staple. Left: Lumpy wool infection causes intense skin inflammation and serum exudate at the skin surface. Right: A later stage of lumpy wool that shows clumping of the wool and wool discoloration due to associated infections.
Source: NSW DPI (2010) Lumpy Wool – A Skin Disease of Sheep. Primefact 986

	FLEECE ROT	LUMPY WOOL
What is it?	<ul style="list-style-type: none"> • A serous exudate (or watery discharge) from the skin and bacterial (most commonly <i>Pseudomonas aeruginosa</i>) staining of the wool staple. 	<ul style="list-style-type: none"> • A disease caused by the bacterium <i>Dermatophilus congolensis</i> which produces a discharge from the skin that is trapped in the wool staple.
How is it caused?	<ul style="list-style-type: none"> • Fleece rot develops following prolonged wetting of the fleece and skin (usually 5 to 7 days). • Moisture breaks down the protective wax layer on the skin. The skin then leaks a watery discharge encouraging bacterial growth. 	<ul style="list-style-type: none"> • The bacteria are inactive or dormant on the skin when dry but are released from scabs on the skin when wet, multiplying and spreading rapidly, causing a skin discharge.
What does it look like?	<ul style="list-style-type: none"> • The wool becomes crusted, matted and often discoloured. • There is often staining of the fleece in distinct bands of yellow, brown, green, red-orange, pink-violet, blue or grey. • Sheep may be irritated and wool can develop a rubbed or 'pulled appearance' where sheep bite to relieve irritation. • Fleece rot forms matted bands of wool fibres parallel to the skin. 	<ul style="list-style-type: none"> • Skin is inflamed and the discharge forms scabs that are generally less than 1 cm in diameter on non-wool areas such as the face and ears. • When occurring on wool areas, the fibres in the staple mat together and dry into a scab. In advanced cases, sheep can have hard 'lumps' or plates of scabs across their back. • Characteristic 'dermo' forms columns or hard lumps growing from the skin up along the wool staples.

FLEECE ROT		LUMPY WOOL
What is the method of spread?	<ul style="list-style-type: none"> Whilst some sheep seem more susceptible, fleece rot is not infectious. 	<ul style="list-style-type: none"> During outbreaks, lumpy wool can spread through a flock when infected sheep become wet and have direct physical contact with non- infected sheep. Severe and rapid spread may occur even if only a small percentage of a flock is initially infected.
What sheep are most susceptible?	<ul style="list-style-type: none"> Animals with poor conformation on their back line, such as a dip between the shoulder blades or a dip behind the shoulders on the backline ('pinched'), where the fleece cannot dry out, or with fleece type that lets the water in and dries out slowly, are most susceptible to fleece rot especially young sheep carrying 4 to 12 months' wool growth. Sheep with old fleece rot lesions are more prone to wetting and re-occurrence of fleece rot. 	<ul style="list-style-type: none"> Lumpy wool occurs mainly in weaners or hoggets, especially those with a fleece type that wets easily, but it can affect sheep of all ages. Young lambs at less than six weeks of age are susceptible to lumpy wool due to the low protective wax content on their wool. Specific risky circumstances: <ul style="list-style-type: none"> Wet weather coinciding with lambing allows the infection to spread from the ewe to the newborn lamb. Handling young sheep in close confinement off shears when sheep are wet. Infection occurs in older sheep if the wax layer is breeched, such as after shearing or dipping. Skin injury from grass seeds also exposes sheep to lumpy wool infection.
What is the effect of the disease?	<ul style="list-style-type: none"> Increased risk of body strike. Reduction in wool quality; wool that is stained and unscourable. 	<ul style="list-style-type: none"> Increased risk of flystrike. Septicaemia or starvation in younger lambs. Loss of condition, reduced skin values and additional handling and treatment costs in older lambs and sheep. Can lead to fleece rot (and staining). Reduced effectiveness of lice treatments or more time needed to apply lice treatments.
How do you prevent it?	<ul style="list-style-type: none"> Select directly for fleece rot resistance as well as indirect traits, including low wool colour and lower fibre diameter variability, see the AWI & MLA <i>Visual Sheep Scores</i> guide, and MERINOSELECT and Merino Sire Evaluation report data for fleece rot and wool colour. Shearing lambs at less than five months of age can result in a higher incidence of fleece rot than if the first shearing is delayed until approximately 12 to 15 months of age. Shear immediately before the start of the rainy season as a short fleece dries quickly and seldom becomes affected by fleece rot. Otherwise, older sheep require at least three months after shearing for their fleece staple structure to form an effective barrier to rain. Where possible, don't handle wet sheep. 	<ul style="list-style-type: none"> Limit physical contact between wet sheep and don't yard wet sheep. Shear and dip young sheep first. Shear or dip affected sheep last and let them straight out. Use of commercially available dip additives (such as 0.5% zinc sulphate solution) may act as a preventative. Separate infected sheep from the flock to assist blowfly management and help reduce lumpy wool spread. Where sheep have active scabs coming up to the expected spring fly wave, use a preventative fly treatment.
How do you treat and control it?	<ul style="list-style-type: none"> There is no effective treatment available for fleece rot, however it usually resolves spontaneously once the wool and skin dry out. Once resolved at the skin level, as the wool grows it moves away from the skin but remains in the fleece until shearing. 	<ul style="list-style-type: none"> Most animals will develop immunity to lumpy wool infection and in most instances the active skin infection heals within four to six weeks. Cull chronically infected sheep due to their ongoing susceptibility to flystrike. In severe cases, sheep can be treated with antibiotics. Seek advice from your vet. Only treat sheep that you plan to shear or that are severely affected and likely to die if not treated. If not shorn after treatment, lumpy wool can reoccur. Avoid handling sheep affected by lumpy wool when they are wet, because the disease can cause a skin infection in humans.

Seek treatment, control and prevention advice from your vet and follow all label directions and veterinary instructions when applying animal health treatments.