

Pregnancy Toxaemia (Ewes)

Glucose is the most essential energy source in the body. Energy drives every system in the body and failure to meet energy demands will slow the ability to grow, to reproduce, to produce milk and allow progeny to survive and grow.

The demand for glucose and its precursors outstrips the ability to deliver whenever the feed quantity and quality is poor. This imbalance will occur in all stock during droughts and in late pregnant ewes in all seasons.

How?

The energy demands of the ewe outstrip the energy supply of the feed and she looks for other energy sources. Fat reserves are then utilised as a glucose source, but without a concurrent balanced energy supply from the diet. This process is inefficient and leads to a dramatic build-up of ketone bodies and other by-products in the bloodstream.

High levels of these products cause brain damage and disturbance of the nervous system. Excessive amounts of ketones in the blood stream will lead to death.

An excess of ketone bodies can occur in both poor and good conditioned sheep and in fact, excessively fat ewes can be more prone to pregnancy toxaemia.

Why? (Disease development and effects)

During the last trimester of pregnancy, there is rapid growth of the foetus which places huge nutrient demands on the ewe, this load is increased if the ewe carries more than one lamb. Failure to meet these demands due to inadequate energy availability in the diet will lead to increased deaths in ewes, an increase in stillborn lambs and dramatic drops in lambing/marking rates.

In addition, the enlargement of the growing foetus within the uterus limits the size of the rumen, which is the major digestive organ responsible for energy absorption. Reducing the size of the rumen limits the amount of feed intake and thus the main supply of energy.

Stress events and management events during this period such as yarding and shearing limit available grazing time and thus availability of energy derived from feed. Elevated stress levels will also lead to diversion of existing energy reserves away from foetal demand.

Calcium metabolism in ewes in late pregnancy will also influence the efficiency of absorption of energy and pasture mineral imbalances will impede rumen and uterine function.

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Tertiary effects

While primary cases may be clearly visible with deaths, sick and recumbent ewes and stillborn lambs, tertiary effects include reduced appetite, poor reproductive rates (marking rates), reduced milk production, poor wool production, slow growth rates of lambs and increased susceptibility to disease. These effects would arguably represent the main loss of production and profitability in the Australian sheep industry today.

In addition, the energy supplies normally used to grow wool and sustain a healthy immune system in the ewe are depleted, resulting in parasite infestations and dramatic drops in wool clip volume and quality.

Controlling energy intake particularly during high-risk periods can minimise the primary and tertiary losses.

Control results from an increased understanding of contributing factors and diagnostic assessment of feed resources available prior to these risk periods. Control and understanding can thus dramatically increase production traits like lambing percentages and wool and meat growth and lead to massive rises in farm profitability.

HOW TO MANAGE THE PROCESS

1. Immediate action - provide the **ELMS Pre-Calving and Pre-Lambing Supplement Pellet** at 160 - 200 grams/head/day. Continue until no further signs of pregnancy toxaemia occur.
2. For affected sheep give electrolytes and/or calcium-glucose injections.
3. Give the ewes a subcutaneous injection of vitamin B₁₂.
4. Assess the condition of ewes regularly and match pasture availability to their needs up until the end of the lambing period on your property. It may be necessary if pasture targets cannot be met, to feed ewes a balanced ration in the 6 - 8 week period prior to the start of lambing when foetal growth is at its greatest. In addition, **ELMS Pre Calving and Pre Lambing Supplement Pellets** should be added to the balanced ration in the last 3 weeks prior to the start of lambing.
5. Provide shelter after shearing.
6. Contact your local **ELMS Manager** to discuss the most appropriate action required on your property.

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