FACTSHEET

August 2018

BIOSECURITY SA
PIRSA

Rib Fractures

Rib fractures reported by the abattoir in almost all instances refer to old, healed fractures that are caused by nutritional deficiencies or imbalances resulting in abnormally weak bones. These bones will break without excessive force.

Occasionally broken ribs may be caused by the use of excessive force during handling, especially in yards when pneumatic handling equipment is set incorrectly. However there is likely to be an underlying weakness in these bones.

ECONOMIC CONSEQUENCES

On Farm	At the Abattoir
• **Production loss may be seen** ○ Slow maturation, later turn-off ○ Ill thrift ○ Anorexia and weight loss; and ○ Infertility	• **Trimming** – sections of affected rib cages are trimmed from the carcass. This results in reduced carcass/dressed weights.

WHAT CAUSES RIB FRACTURES?

The cause of rib fractures is highly complex and can involve the deficiency or imbalance of the following:

- Vitamin D
- Calcium and phosphorous; and
- Copper and molybdemun (and iron and sulphur).

The end result is weak bones that break easily. Most commonly rib fractures are seen in fast growing lambs on lush pastures. In South Australia the majority of rib fractures are seen in lambs from the South East, Adelaide Hills/Fleurieu Peninsula and Kangaroo Island.

Deficiencies can be **primary** (caused by dietary deficiencies). For example:

- Cereal and grass hays and green oats are deficient in calcium. Problems are seen in late winter or early spring.
- Lush grazed pasture has a low availability of copper compared with conserved forage.

Internal parasites can also interfere with the uptake of calcium in the diet by damaging the intestinal lining. The most significant parasite involved is the black scour worm *Trichostrongylus vitrinus.*

SOUTH AUSTRALIA
Government of South Australia
Primary Industries and Regions SA

Most common deficiencies are **secondary**, that is they are caused by other factors. For example:

- Lush green feed contains anti-vitamin D substances.
- High grain diets contain excess phosphorous, this results in calcium deficiency if calcium is not added to the ration.
- Molybdenum, iron and sulphur act to bind copper and cause deficiency.

WHAT MIGHT BE SEEN ON FARM?

- Many animals with rib fracture show no obvious signs however some may be seen having difficulty breathing after handling.
- Ill thrift, anorexia, weight loss and infertility may also be seen.
- If other bones are affected then reluctance to move, lameness, bowed legs, swollen joints and soft bones of the skull may be noticed (this is rare).

TREATMENT

Treatment is dependent on the underlying cause of the problem (based on examination and blood analysis) and may involve:

- Providing a trace mineral mix or other oral or injectable supplement (based on the specific deficiency).
- Adding hay to the diet – if grazing rapidly growing lush winter pasture or cereal crops.

Care must be taken with supplementation to avoid causing further harm with toxicity (by giving the wrong type or amount of supplementation).

PREVENTION

1. **Ensure rations are complete and balanced**
   - Seek nutritional advice and analysis; and
   - Ground limestone should be added to concentrate rations to ensure adequate calcium.

2. **Soil and pasture tests**
   - This can be performed by agricultural laboratories and advice on adjustments in management can be given.
   - Preventative supplements may be given as indicated.

3. **Check settings on handling equipment**
   - Ensure pneumatic settings are appropriate for the size of stock being handled.
   - Pre-draft lambs into size groups if significant variation and adjust setting accordingly.

FOR FURTHER INFORMATION:

Contact the Enhanced Abattoir Surveillance (EAS) Program Dr Allison Crawley (Phone: 08 8429 0866 or Email: Allison.Crawley@sa.gov.au), your local veterinary practitioner, livestock consultant or local PIRSA Animal Health Officer.

FOR ANY SIGNS OF UNUSUAL OR SERIOUS ANIMAL DISEASE,
PLEASE CALL THE 24/7 DISEASE WATCH HOTLINE: 1800 675 888