

Mineral Deficiencies Hold Sheep Back

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Key messages

- **Mineral deficiencies are still holding back sheep on some EP farms.**
- **Highly calcareous soils are most at risk.**
- **Cobalt is the most likely deficiency.**

We have known for many years that on coastal areas of EP, particularly calcareous country, sheep do not grow as well as on heavy country. One reason is due to cobalt and/or copper deficiency. However, farmers have been struggling to come up with simple, reliable ways to overcome the problem.

Work done by the Streaky Bay and Elliston Sheep Groups has now found some clear guidelines.

Cobalt

In coastal country, where sheep do not thrive, the essential cobalt treatment is a Vitamin B12 injection at marking, and **every 6 weeks** until the lambs are big enough to be given a cobalt bullet - which should last until they are sold.

On calcareous country we twice recorded severe deficiency in lambs 8 weeks after a B12 injection.

We also twice recorded severe deficiency in lambs at lamb marking. For this reason ewe lambs that will be retained must have a cobalt bullet so that they pass B12 on to their lambs. We tested ewes at 5.5 years old and their bullet was still working. In bad areas, ewes could be given a B12 before lambing (with the 3 in 1 vaccine) so some extra B12 is passed onto the lamb. This is optional but **the bullet is essential.**

Some sheep may lose their bullets or the bullet runs out after three years. Poor sheep in an adult mob could be given another bullet.

Copper

The ideal treatment for copper deficiency is to use copper fertiliser. The only time that copper fertiliser is not the best long term solution is when molybdenum is high and it ties up the copper.

We only found copper deficiency on two properties however, blood tests are less reliable for copper as they only show up severe deficiencies, and only in winter.

If you are in calcareous country and your young sheep do not do well, even with full cobalt treatment, you have two choices;

- treat 15 lambs **each year**, identify them at marking with an extra ear tag, and see how they go, or
- arrange for a liver test for copper when you kill young ration sheep in winter or spring.

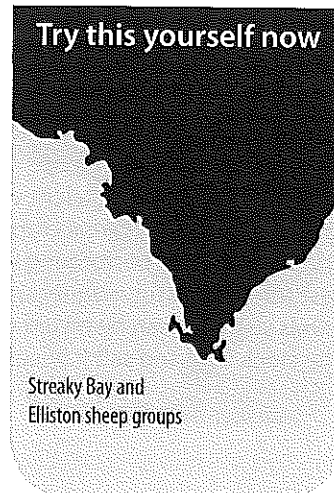
Recommended treatments for copper are a copper sulphate drench every 6 weeks until they are big enough for a Permatrace Copper pellet (at least 2 months old). The pellet should be given every year, although every second year may work if the bullet is given early in winter.

More information on copper can be found in the Eyre Peninsula Farming Systems Summary 2005, p. 108.

Calcium

Sheep can become calcium deficient (even in calcareous country). The most likely deficiency occurs when sheep have been fed cereal grain and not given stock

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Streaky Bay and Elliston sheep groups

lime. The other time is when they are grazing green cereal crops.

Always give stock lime when feeding over 1 kg a week of cereal grain for over a month. It can be mixed with the feed or just put in a drum with salt (e.g. 80:20 stock lime:salt).

When grazing green cereal crops also give the above mixture in a drum.

Magnesium

Work in the eastern states of Australia has shown that magnesium can be deficient when sheep graze green cereal crops. If the stock are not performing well, test the pasture for magnesium levels so that it can be mixed with the stock lime and salt if necessary.

Acknowledgements

The Meat & Livestock Australia PIRD program funded the Streaky Bay and Elliston sheep groups.

Eyre Peninsula Grain and Graze project funded blood sampling and data collection, collation and promotion.

Eyre Peninsula Grain & Graze is funded by Meat & Livestock Australia, Grains Research & Development Corporation, Australian Wool Innovation and Land & Water Australia.

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Types of work in this publication

The following table shows the major characteristics of the different types of work in this publication. The Editors would like to emphasise that because of their often unreplicated and broad-scale nature, care should be taken when interpreting results from demonstrations.

Type of work	Replication	Size	Work conducted by	How analysed
Demo	No	Normally large plots or paddock size	Farmers and agronomists	Not statistical, trend comparisons
Research	Yes, usually 4	Generally small plot	Researchers	Statistics
Survey	Yes	Various	Various	Statistics or trend comparisons
Extension	N/A	N/A	Agronomists and researchers	Usually summary of research results
Information	N/A	N/A	N/A	N/A