

SGSL TRIAL SITE SUMMARY #12



THE NUTRITIONAL REQUIREMENTS FOR LIVESTOCK PRODUCTION GRAZING SALT LAND PASTURES

Mt Charles Saltland PPP Group, Upper South East, SA

Research Objectives

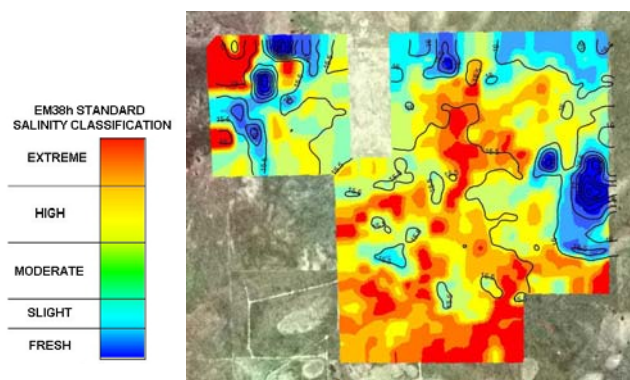
To determine the nutritional requirements for sheep and cattle production from saltland pastures.

To identify nutritional deficiencies that are potentially limiting production.



The Trial

- Blood samples were taken from Merino wether lambs and calves grazing on puccinellia and tall wheat grass pastures, for analysis of trace element status.
- Pasture samples were taken for analysis of nutrient/ mineral content and feed quality.
- Four properties were involved in the study.



Aerial photo & EM survey data for the main 'T. Egel' site.

Results

- Vitamin B₁₂ deficiency (arising from unavailability of cobalt) was an issue on all of the properties tested.
- This represents a change from the historical cobalt status of the properties and is thought to be associated with salinisation and rising highly alkaline groundwater.
- Copper, selenium and zinc levels in the stock were satisfactory.
- The mineral contents of the saltland pastures declined sharply over the summer-autumn period.

Fast Facts

Location: Mt Charles, Upper South East, SA

Soil Type: Sand over clay

Rainfall: 500mm

Pasture Base: puccinellia and tall wheat grass

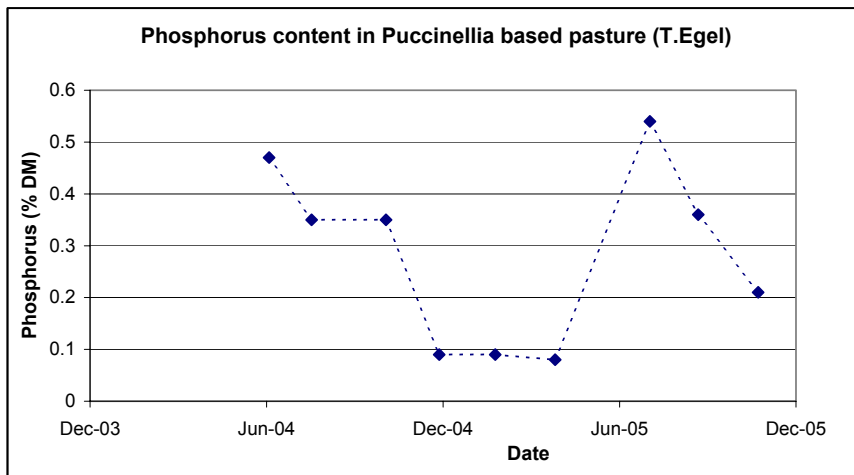
Landscape: Sandy interdunal flats

Results (continued)

- Significantly reduced concentrations over the summer–autumn period were detected in the puccinellia pasture of the main trial site in the major nutrients N, P, K, S, Ca and Mg, and in the trace elements Cu and Zn.
- Crude protein levels declined noticeably in the puccinellia pasture during summer–autumn, below reference levels for maintenance of dry sheep (7-10% dry matter). Hence feed supplementation is warranted over this period.
- Options to manage Vitamin B₁₂ deficiencies can include a combination of:
 - Supplementary feeding,
 - Vitamin B₁₂ injections,
 - Cobalt ‘bullets’, and
 - Pasture cobalt sprays.



SA's SGSL Coordinator and Rural Solutions SA senior consultant Jock McFarlane blood tests lambs.



Example plots of phosphorus and copper illustrate the sharp decline in mineral content over the summer-autumn period.

Want to know more?

Participating Host Farmer:
Trevor Egel

Technical Support:
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