

Saltbush lifts sheep meat vitamin content

Saltbush can maintain sheep during summer and autumn when other sources of feed are limited. But this article shows saltbush might also have a positive impact on meat quality and animal health.

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The meat of sheep grazing saltbush has surprisingly high vitamin E levels, according to recent CSIRO research.

The finding has important implications for animal health and meat quality.

Sheep health benefits

Low vitamin E levels in dry summer feed can lead to the sheep muscle-wasting condition — nutritional myopathy.

Vitamin E is plentiful in green pastures but not in dry pasture and grain stubble, resulting in the need for vitamin E supplements.

Farmers use synthetic vitamin E supplements to protect sheep against this disease but administering supplements can be time-consuming and costly.

Joint CSIRO, Murdoch University and Department of Agriculture, Western Australia research found grazing hoggets on saltbush, supplemented with barley, boosted meat vitamin E content from 2.5 milligrams per kilogram to 6.5mg/kg. Such vitamin E levels would protect sheep from nutritional myopathy.

The vitamin E finding is good news for producers managing salt-land pastures.

Even if sheep were to graze dry stubble and saltbush concurrently, they would benefit from the extra vitamin E.

At a glance

- Meat from sheep grazing saltbush is high in vitamin E.
- The higher than usual vitamin E levels could protect sheep from a muscle wasting disease known as nutritional myopathy.
- Vitamin E also acts as an antioxidant, helping to preserve the fresh red colour and shelf life of meat.
- Meat from sheep grazed on saltbush was leaner and more hydrated than regular lamb with consumer appeal equal to grain-fed lamb.



Photos: CSIRO Livestock Industries

Meat from sheep grazing saltbush has surprisingly high levels of vitamin E, is leaner and more hydrated than regular lamb and has consumer appeal equal to grain-fed lamb. The vitamin E levels could have animal health benefits while extending the shelf-life and maintaining the fresh red colour of saltbush lamb.

Vitamin E is a powerful antioxidant and has been shown to improve the colour stability and shelf-life of beef. Meat retailers view meat colour as the most important attribute of sheep meat

The research found meat from saltbush-grazed sheep retained a fresh red colour for longer than meat from similar sheep grazing dry stubble with a barley supplement.

In addition the CSIRO research found meat from lambs grazed on saltbush grown

on saline land was leaner than regular lamb and its consumer appeal was equal to grain-fed lamb. Saltbush lamb also was more hydrated than regular lamb and this could improve carcass weight attributes.

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Sheep diet selection surprising

Sheep prefer river saltbush over old man saltbush but there does not appear to be a nutritional reason for their choice.

When CSIRO Livestock Industries' scientist Hayley Norman and University of Western Australia student Colby Freund set out to determine why sheep select river saltbush over old man saltbush they expected to find old man saltbush was less nutritious.

But to their surprise, it was the most preferred species, river saltbush, which had the least nutritional value.

In a mixed plantation at Tammin, WA, river saltbush was less digestible, contained more fibre and had less nitrogen (protein) and sulphur than old man saltbush and yet sheep actively selected it.

Sheep usually select foods with high digestibility and low fibre so Dr Norman's finding is curious.

The research results suggest factors other than nutrition influence sheep selection of saltbush species.



Hayley Norman (pictured) said sheep preferred river saltbush over old man saltbush despite old man saltbush being more digestible.

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