

Reduced methane benefit of native shrub diet for sheep

A Chinese PhD candidate at the University of WA (UWA) has found that the Australian native plant *Eremophila g* *Eremophila glabra* (or tar bush) reduces methane production from sheep when it is included in their diet.



Credit: Carl Davies/CSIRO

Two-thirds of the nation's agricultural emissions come from enteric methane produced during digestive fermentation in sheep and other ruminants. These ruminant emissions account for about 10 per cent of national greenhouse gas emissions.

Ms Xixi Li and her colleagues screened more than 100 native plants as supplements to improve feed intake, digestibility and rumen fermentation, before selecting *E. glabra*, a shrub that tolerates harsh growing conditions and could provide livestock fodder in WA, even in drought.

'I found an optimal inclusion level of *E. glabra* can reduce methane production by about one-third while not adversely affecting general rumen fermentation,' Ms Li said.

The research suggests that *E. glabra* need only make up a part of a sheep's diet to reduce methane emissions. Ms Li says the plant would ideally supplement a more diverse mixture of plants for grazing.

'This would give us a solid base to reduce greenhouse gas emissions from ruminants and contribute to developing green, sustainable and profitable grazing systems for WA sheep.'

Another UWA PhD candidate working at CSIRO's Floreat laboratory has demonstrated a number of benefits in feeding sheep saltbush (*Atriplex* spp.), a native shrub used to revegetate areas of dryland salinity. The saltbush provides a dietary source of Vitamin E.

‘With salinity such a threat to extensive agriculture in Western Australia, including saltbush could potentially reduce the area lost to productive cropping and the additional biomass could provide a valuable source of green feed as fodder during typically long, dry summers,’ said the researcher, Ms Chelsea Fancote.

‘Persistent lack of green feed during summer can lead to vitamin E deficiency and subsequent onset of the potentially fatal disease known as nutritional myopathy.’

Source: UWA

From **ECOS** online <http://www.ecosmagazine.com/?paper=EC11074>