Evaluating the potential of Tedera as a forage option for the Mallee

Andrew P. Smith, Bill Davoren, Rick Llewellyn, Maxime Salot, Damian Mowat and Willie Shoobridge
CSIRO Agriculture, Waite Campus, PMB 2 Glen Osmond, South Australia, 5064
Peer review: Therese McBeath, CSIRO Agriculture

Background
Tedera (Bituminaria bituminosa var. albomarginata) has been proposed as a forage option for the low rainfall zone of Australia. It is a perennial legume with a relatively large seed size (similar to cereals) and the ability to retain green leaf over summer. In May 2015, we established a field experiment at the MSF Karoonda site to monitor the growth of two lines of Tedera (T15 and T47), developed by DAFWA which are intended for commercial release in the next few years. The experiment includes a comparison with two currently available forage options: perennial Veldt Grass (Ehrharta erecta) and SARDI-Grazer (Medicago sativa; rating 6), a recently released lucerne variety which is active over winter.

Why was the project done?
Tedera may have the potential to fill a feed niche in mixed farming systems but has not been evaluated under Mallee field conditions. In order to understand its potential growth, we have also been monitoring soil moisture extraction to 1 m on swale and dune soils, and in order to understand the livestock feed value potential we have taken plant samples for nutritional analysis.

Key Messages
- As a result of the frosty and dry winter conditions, Tedera establishment measured in August was about 11-15 plants/m² and for lucerne was about 18 plants/m² with poorer establishment on the sand hill in both cases – despite the adverse conditions we were content with the plant numbers,
- Dry conditions leading up to, and after sowing meant that the pastures were sown into almost dry soils which would have compromised nodulation of the Tedera and lucerne,
- Tedera had very slow early growth rates leading up to November (448 and 481 kg/ha for T47 and T15). Veldt had the highest growth rates (1920 kg/ha) followed by the Lucerne (690 kg/ha),
- At the start of 2016 (before the late January rains) in the previously uncut areas, Tedera was still mostly green (807 and 1198 kg/ha for T47 and T15) but starting to drop some leaves, lucerne had also dropped some leaves but was still green (725 kg/ha), and Veldt was mostly dry but with some small green leaves at the base (1067 kg/ha) (see Photos),
- Further testing, including grazing value, is needed here and elsewhere to determine if Tedera will offer value to mixed farmers compared to existing perennial plant options.

Photo 1. Tedera – leafy green foliage (left), individual plant with some leaf drop (right) (Photo taken: 28/01/2016)

Photo 2. Lucerne – some green foliage (left), small leaves and high proportion of stem (right) (Photo taken: 28/01/2016)
Photo 3. Tedera and Veldt (left), Veldt with small green leaves at base (right) (Photo taken: 28/01/2016)

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