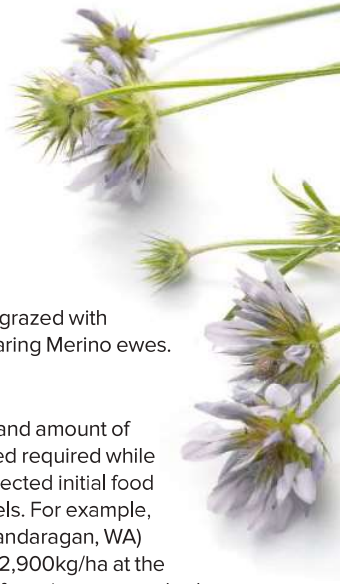


Mediterranean legume unlocks live weight gains



WA producers are trialling the ‘Mediterranean diet’, putting a perennial, drought-tolerant forage legume through its paces to bridge feed gaps.

Tedera (*Bituminaria bituminosa* C.H. Stirton var. *albomarginata*) is a traditional forage from the Canary Islands, Spain. It was first introduced to Australia in 2005 – it’s well adapted to Mediterranean-like climates with the ability to remain green year round, providing out-of-season, high quality forage.

An MLA-supported Producer Demonstration Site (PDS) currently underway aims to demonstrate how tedera can increase the live weight of sheep and cattle over summer and autumn.

It’s the culmination of years of research that tested tedera varieties in field trials in a wide range of locations to develop an agronomy package for producers.

Filling feed gaps

This latest research examines whether tedera production can be accumulated and utilised to fill feed gaps in the Central Midlands and Wheatbelt regions of WA.

In Mediterranean-like climates such as in these regions – with a winter and spring growing season – two key feed gaps occur at the shoulders of the growing season:

- one after February–March when stubbles lose their quality and lasting to between May–June before annual

- species are ready to be grazed
- from the end of the season (around mid-October) when annuals start to deteriorate and lasting to mid-December when the first stubbles become available.

While tedera can grow all year round, its production is best used at these two periods, making it a perfect fit for the Australian red meat industry.

Replacing handfeeding

Grazing experiments in WA have shown tedera, which can sustain continuous grazing, can reduce or eliminate the need for costly and time-consuming hand-feeding stock in summer and autumn.

These results align with three previous summer and autumn grazing experiments at Dandaragan and Kojonup, WA.

The PDS, run by the Moora Milling Pasture Improvement Group, is evaluating animal performance from four commercial stands of the new perennial legume pasture.

The stands were sown in June 2020 and first grazed in May and June 2021, covering the first shoulder of the growing season, by using the accumulated growth from spring and summer.

All four sites were grazed with pregnant, twin-bearing Merino ewes.

Stocking rate

The stocking rate and amount of supplementary feed required while grazing tedera reflected initial food on offer (FOO) levels. For example, the Strathmore (Dandaragan, WA) site with a FOO of 2,900kg/ha at the commencement of grazing was stocked with 28 ewes/ha for 32 days, and ewes received 5kg/head of supplement.

The control ewes on the same farm (grazing crop stubbles and annual pastures) were stocked at four ewes/ha and received 18kg/ewe of supplement.

Across the three monitored sites, when compared with the control pasture, tedera:

- maintained a higher stocking rate*
- produced higher weight gain and condition score*
- required less supplementary feed than control pastures.*

Next steps for the tedera project include testing its viability in other Australian growing regions including Tasmania, SA, Victoria and NSW. ■

*On two out of three sites.

Keen to grow tedera? Watch out for weeds

Producers who are considering tedera should note it needs to grow without competition as a pure crop for the first year for a successful establishment. This is due to tedera’s susceptibility to weeds in the first year. High weed burdens after sowing can significantly reduce plant populations.

Herbicides are a very important tool if tedera cannot be sown into a weed-free paddock for its first year. Several herbicides were identified that are well tolerated by tedera and that can be used pre- or post-emergent to control grasses and broadleaf weeds.

Appearance	Herbicide
Pre-emergent:	<ul style="list-style-type: none">■ Clopyralid to control emerged capeweed, fomesafen to control pre-emergent wild radish■ Double mix of fomesafen + diuron or flumetsulam + diuron■ Triple mix of fomesafen + diuron + flumetsulam to control pre-emergent capeweed, pre- and post-emergent wild radish, and other broadleaf weeds.
Post-emergent:	<ul style="list-style-type: none">■ Diflufenican, diuron, flumetsulam, fomesafen, and their two or three-way mixes that will provide good control of pre- and post-emergent capeweed and wild radish.



» Zac Roberts with his children Jude, Lydia and Sam.

Tedera boosts productivity

ACTION PLAN

1 Select your paddock

Preferably weed-free. If weeds are expected to be problematic, pre-emergent herbicides will be required followed by post-emergent herbicides one month after sowing.

Paddocks with fertile soils that offer little impediment for roots to go deep are recommended. Sandy/loam or loamy/sands give very good teder performance. White/infertile sands and/or heavy valley floors that get waterlogged during winter are less suitable.

2 Sow during cooler months

Sow into moist soil in autumn, early winter or spring. In regions with a long growing season that have severe cold winters, spring sowing is recommended.

3 Graze over the warmer months

During summer and autumn continuous grazing can be applied with good live weight gains.

Grazing can be applied at both shoulders of the growing season: late spring when annuals start to senesce and before stubbles become available, and at the start of the season when crops are already sown and pasture paddocks are germinating. Teder can extend the growing season for about three months – 1.5 months before and after the growing season.

Plants should be grazed to maintain green leaves on them. Teder can tolerate heavy grazing but will require a long rest period to accumulate reserves before the next grazing.



Visit MLA's legume hub at mla.com.au/legumes

Daniel Real daniel.real@dpird.wa.gov.au

Felice Driver fdriver@mla.com.au

WA wheatbelt farmer Zac Roberts, Dandaragan, has been experimenting with teder pastures to manage soil type and increase live weights on his mixed sheep, cattle and cropping property.

Zac hosted a trial as part of the MLA Producer Demonstration Sites (PDS) – see story opposite.

Recently-weaned Merino lambs grazed each of the trial sites. Lambs were weighed at the start and end of grazing. At each site, one large pre-existing mob of lambs was split with some lambs grazing teder and some lambs grazing control pastures consisting of annual pastures and crop stubbles. Sheep were supplementary fed as required.

Zac grazed 600 Merino lambs on 12ha of teder pasture for 57 days from 14 October–10 December 2021. The feed on offer (FOO) at the start of grazing was 11,400kg/ha.

The remaining 986 lambs grazed 100ha of annual pasture containing mostly serradella and annual ryegrass. The FOO of the annual pasture at the start of grazing was 3,300kg/ha.

Neither mob was supplementary fed during this period.

Results

The teder lambs had a slightly lower average daily live weight gain than the control lambs (114g/head/day compared to 125g/head/day), however this was due to the far higher stocking rate (50 lambs/ha compared to 10 lambs/ha).

“The teder pasture produced significantly more lamb live weight (325kg/ha compared to 70kg/ha) over the same period of 57 days,” Zac said.

“When the dry sheep equivalents (DSE) grazing days from the two grazings (autumn and spring) are added together, the teder paddock carried 13.5 DSE/ha in 2021 – we found that this is well above the farm and district average, which is exciting.”

Lessons learned

Although teder is promising, Zac said there've been plenty of lessons learned along the way.

“We saw excellent live weight growth in our Merinos on teder from October to December, but due to a lack of rain over the last summer, regrowth has been slow,” he said.

Despite its resilience to hot and dry weather thanks to its Mediterranean origins, teder can still be susceptible to stress and disease.

SNAPSHOT



ZAC ROBERTS
Dandaragan, WA



AREA
5,000ha

ENTERPRISE
Sheep, cattle and cropping

LIVESTOCK
400 Angus breeders, 5,000 Merinos, 5,000 crossbred sheep

PASTURES
Sub-clover or serradella with annual or perennial grass

SOIL
Loam through to sand

RAINFALL
500mm

The best management is to defoliate frequently when teder is under stress and allow it to grow and accumulate biomass when there are good growing conditions, which Zac experienced following autumn rain.

“Thanks to some good rain in April and May, we'll be able to test lamb survival rates from July onwards by comparing teder to a control paddock,” he said.

“Being able to offer constant grazing and reduce handfeeding has the potential to cut costs and time over the summer.

“There's a while to go in order to ensure teder's long-term commercial viability, but we are emboldened by its ability to increase live weights across our Merinos here in Dandaragan.” ■