



To mix pasture species or not? Condobolin trial

What mix of perennial and annual pasture species provides maximum productivity, profitability and resilience to drought?

Pasture mixes in southern NSW in recent times have become highly annualised. Over time, perennial pasture systems have degraded, increasing vulnerability during drought periods.

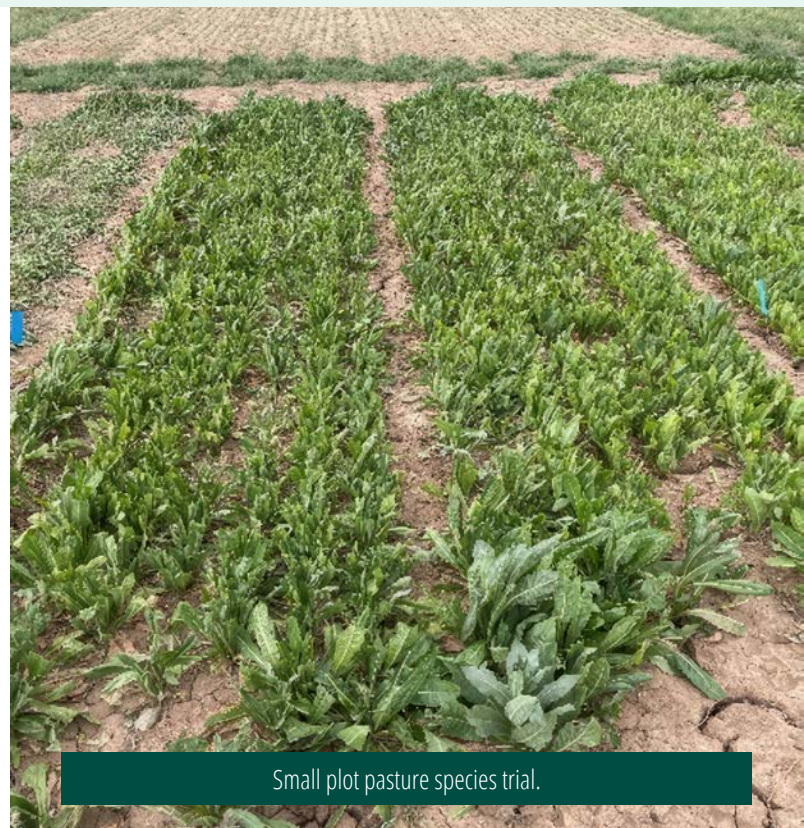
A productive perennial pasture can support the agronomic and economic performance of the farming business by maintaining ground cover and soil health whilst reducing the demand for supplementary feeding. However, finding the optimal mix of species is required.

Aim

Assess the long-term persistence capabilities of various perennial and annual pasture species mixes by comparing their productivity and resilience in the Riverina region and to upskill producers on pasture phenology, biology, growth habits, management requirements, enterprise selection suitability and productivity attributes of pasture mix species and individual species options for drought tolerance.

Site

The trial located the Central West Farming System, Fettel Centre property, near Condobolin, NSW was established in May 2023 as part of the SNSW Innovation Hub's Resilient Pastures project funded through the Future Drought Fund.



Small plot pasture species trial.



Treatments

The variety trial consists of 40 commercially available pasture species and pasture mixes consisting of fescue, cocksfoot, prairie, serradella, chicory, plantain, medics, biserrula, clovers and sub-clovers, ralphnobrassica, forage rape and brassicas.

Prior to sowing, 60 kg/ha MAP was pre-drilled. All pasture seed varieties either had pre-coated inoculant or received inoculant at sowing, as well as insecticide and pre-emergent Trifluralin where appropriate. The site was affected by flooding in spring and summer of the previous season. Trial plots are 10 m x 1.42 m and replicated twice.

Some of the Pasture species selected are representative of species that exist in some of the Producer Demonstration Site Paddock mixes (as part of this project), allowing producers the ability to compare species attributes when planted as a monoculture and a as pasture mix.



Pasture species trial at Fettle demonstration site, May 2023.

For more information

Find out more about the CWFS Resilient Pastures Project Research Results.

cwfs.org.au



What will this tell us?

This trial will provide Condobolin livestock producers with specific key production and persistence data on how a wide range of pasture species perform when sown as a mix. It will offer a clear idea of how currently used species perform compared directly to other less commonly used species and mixes and could also give producers more confidence to select different cultivars of species that are currently in use or try alternative species, hence providing a wider variety of options when selecting species for sowing or renovating pasture systems.

With data from benchmark species compared to data from all other species, producers can make a valuable comparison as to whether their current species and mixes are providing the same level of persistence and productivity as other species available on the market.

Results

This trials' analysis as part of the Resilient Pasture Project ended June 2024. A full set of results are available from the Central West Farming Systems group.

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