

Transitioning from annual fodder crops to perennial pasture in a beef cattle system

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Research Purpose

How to integrate more perennial pastures into a beef production system while maintaining or exceeding the productivity of annual fodder crops. The research examined the barriers to shifting from annual fodder cropping to perennial pastures in the mixed farming systems of the North-West Slopes of NSW, in response to climate variability, declining soil fertility and rising input costs.

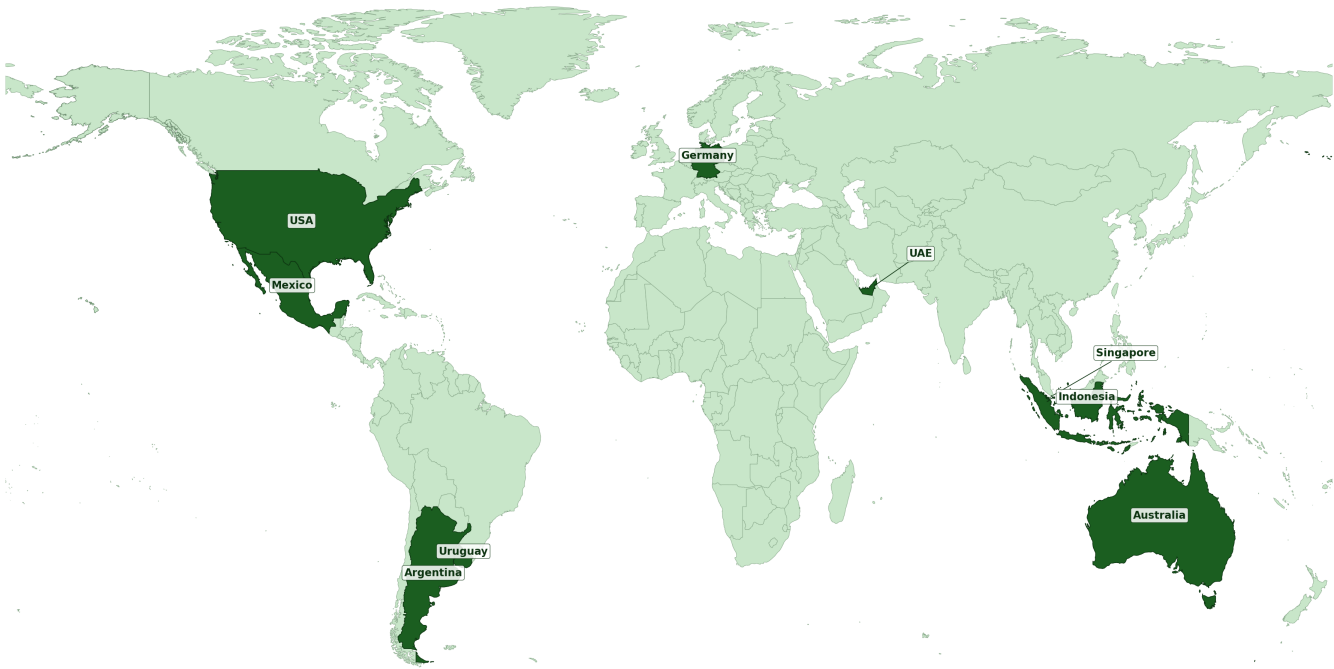
Key research objectives:

- Whether improvements can be made by transitioning to perennial pasture
- How temperate species can be better managed in a transitional climate
- Whether such a transition is viable while maintaining production and profit

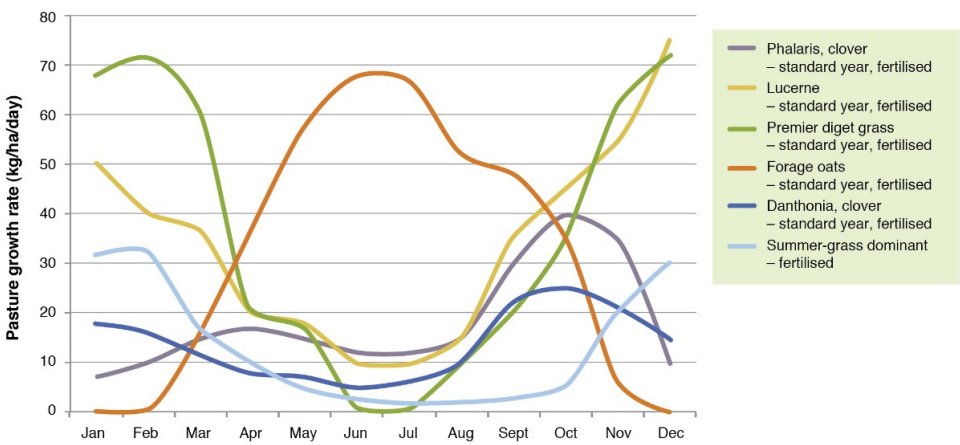
Key Learnings

- Annual fodder crops remain a critical element in a patchwork feedbase system in a transitional environment.
- Reducing persistence expectations of temperate pastures can increase productivity.
- Balancing legume/herb/grass composition requires adaptive, rather than timed grazing strategies.
- Comparing the cost of production of annual fodder vs perennial pasture needs to incorporate cost of dry matter kg/ha/year, rather than input cost alone.

Travel



Case Studies



Pasture growth curve for North-West Slopes NSW



Typical Perennial System in Uruguay

Spray out 3-4 year old perennial pasture in summer, sow tetraploid annual rye grass, spray out and plant soybean, broadcast Italian rye grass at soybean harvest. Spray out Italian rye in January, sow new perennial pasture in March. Keep for 4 years, spray out December of year 4 to plant rye grass in March.

Left: Continental tall fescue, red and white clover (Uruguay)
Right: Phalaris and white clover (Argentina)



Recommendations for Industry

- Temperate perennial pasture should be more widely adopted in transitional environments such as the North-West Slopes of NSW, integrated in a system with sub-tropical grasses and annual fodder crops.
- Temperate pasture species need to be trialed in more challenging, non-traditional growing regions.
- Development of high yielding annual forage crop varieties must continue.

Thank you to my sponsor



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