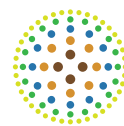


PASTURE SEEDS



An R&D program managed by the Rural Industries Research and Development Corporation

At a glance

Australia's pasture seed industry is small but important, contributing \$107.2 million to the economy annually, underpinning pastoral enterprises across the nation and feeding livestock around the world.

There are 489 pasture seed producers in Australia, concentrated in south-eastern Australia and south-west Western Australia. They grow a range of temperate legume pasture species, including lucerne (which contributes the most economic value), subterranean clover, perennial clovers, medics and annual clovers.

Seeds are used to establish fodder crops – predominately for beef cattle, feedlots, dairy and horses – and to improve pastures for grazing. In fact, there are more than 8.6 million hectares of grazing area across Australia, sown to pasture species reflected in RIRDC research.

There is a strong domestic market (\$29.5 million), but most of the value generated from Australian-grown temperate legume pasture seed is from export, which is worth \$77.6 million per year.

Although Australian growers only contribute 2.6% to the total pasture seed production of countries in the Organisation for Economic Co-operation and Development (OECD), their geographic positioning isolates crops from many pests and diseases found elsewhere around the world.

As a result, Australia has formed a solid base of export clients. Key markets are Argentina, the US, Saudi Arabia, and Italy, while regions such as the eastern European Union, China and South-East Asia present expanding opportunities.



Research and development

Australia's temperate pasture legumes have been developed to fit diverse climates, soil types, and farming and livestock production systems.

Until the mid 1980s, the primary source of temperate pasture legume cultivars for breeding was the public sector, through state-based and CSIRO breeding programs. However, after a reduction in public-sector funding for agricultural research and the introduction of legislation protecting new cultivars as intellectual property, the private plant breeding industry has strengthened.

Research and development corporations (RDCs) including RIRDC, Meat and Livestock Australia, Dairy Australia and Australian Wool Innovation all invest in pasture plant breeding.

RIRDC's projects rely on industry links. Currently, RIRDC has linkages with Grain Producers of Australia, the Australian Seed Federation, species-specific groups such as Lucerne Australia and regional grower groups.

The RIRDC Pasture Seeds Program is partially funded through an industry levy on seed sales, with between \$10 and \$15 per tonne flowing back into research, which is matched by Commonwealth Government funds. RIRDC provides additional funding for 'one-off' priority projects. Between \$300,000 and \$400,000 is invested in the program each year. Since 2005, nearly \$3.5 million has been spent on R&D for this industry.

Over the next five years, RIRDC's Pasture Seeds Program will focus on five complementary objectives:

- Industry alignment to develop collaboration and partnerships
- Development and extension of products to increase efficiency and effectiveness in seed production, processing and marketing
- R&D to underpin the development of export and domestic markets
- Communication and extension strategies to inform stakeholders on R&D, new products and market opportunities
- Capacity building to equip industry participants with skills and knowledge to deliver high-quality pasture seed to the market.



Fertiliser is a significant input for lucerne seed production. There are hundreds of different products on the market, including manure, liquid and granular chemicals, and compost. But growers lack an objective tool to compare efficiency and effectiveness.

In 2012, RIRDC joined forces with the peak industry body for the lucerne seed industry, Lucerne Australia, to conduct the first independent fertiliser trial for lucerne seed systems.

The three-year trial (which has the potential to extend to five years) is assessing 30 fertiliser products in a range of forms, at different application rates, in irrigated and dryland systems in the heartland of lucerne seed production at Keith, South Australia.

“This project stands to deliver significant gains for lucerne seed growers because, for the first time, they will have a clear picture to determine what fertiliser products will deliver the maximum benefits to their enterprise,” Lucerne Australia’s executive officer Nicola Raymond explained.

“It will give growers a tool to cost-effectively fertilise lucerne for seed crops, to maximise seed yields and gross margins and manage environmental impacts of over-application.”

Lucerne seed producer Joe Cook cannot wait to incorporate the trial results into the mixed enterprise he runs with his family at Keith.

The Cooks grow irrigated and dryland lucerne for hay and seed production, as well as crop wheat, barley, canola and lentils. They also graze sheep and cattle over 900 hectares.

Their sustainable management includes strategically applying fertiliser to replace nutrients such as phosphorus, sulfur and potassium, which are removed from soil during seed and hay production.



South Australian lucerne seed producer Joe Cook. Image supplied by J. Cook.

“ **These trials will give growers a tool to cost-effectively fertilise lucerne for seed crops, to maximise seed yields and gross margins and manage environmental impacts of over application.** ” - **Nicole Raymond, Lucerne Australia**

“Like most growers, we don’t have the available land, time, expertise or resources to conduct our own fertiliser trials, so we rely on on-farm observations and advice from our agronomist to plan our annual fertiliser program,” Mr Cook said.

While similar trials have been conducted for fodder production, this is the first independent large-scale trial of fertiliser products and application rates for dual systems.

Mr Cook said the trial could not have come at a better time, as many lucerne seed producers are feeling the pinch of recent tough seasons and want to optimise inputs.

“Fertiliser contributes 20 per cent of our annual production costs for lucerne, but we are currently making decisions without objective data. This trial is exciting because it measures the performance of different products, in different forms, and at different application timings and rates.

“We are prepared to change our input program and even spend more on fertiliser if it means boosting production. As seed producers, yield is critical, so if we can add an extra 10 per cent in production through more effective fertiliser, it will mean a lot to our bottom line.”

He will also be looking at the results for the environmental impact of different fertilisers.

As a member of the RIRDC Pasture Seeds Advisory Committee, Mr Cook appreciates the opportunity to contribute to research that is relevant and cost-effective to industry.

“The fertiliser trial is a great example of how industry can help set research priorities and be involved in developing solutions to production, season and market challenges.”

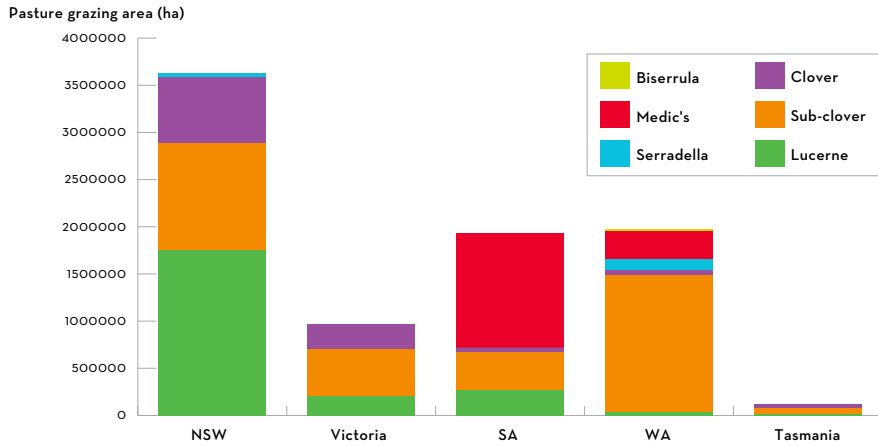


Figure 1: Estimated grazing area (ha) of temperate pasture legumes species of interest by State (2011)

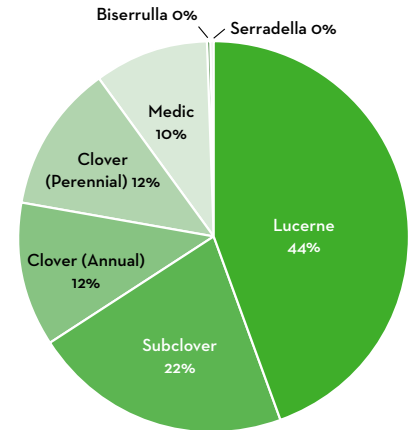


Figure 3: Temperate legume pasture planting seed estimated market volume x species (2007-08 to 2010-11) (industry estimated volume 20.6Mt)

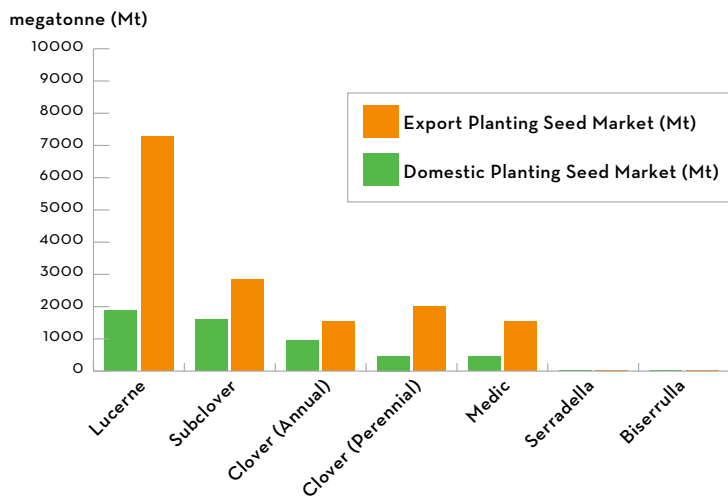


Figure 2: Estimated temperate pasture legume planting seed market: domestic versus export (2007/08 - 2011/12)

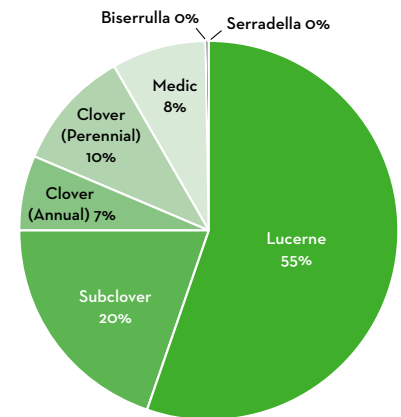


Figure 4: Temperate legume pasture planting seed market estimated value x species (2007-08 to 2010-11) (industry estimated value \$107.2million (AUD))

Facts and figures

- The temperate legume pasture seed industry adds \$107.2 million to Australia's economy each year
- There were 489 certified seed growers in Australia in 2012-13
- Growers pay levies of between \$10 and \$15 per tonne of seed sold
- More than 8.6 million hectares of grazing land across Australia has been planted with RIRDC legume species of interest.

Source: Pasture Seeds Program Five Year Plan for 2013-18.

Visit www.rirdc.gov.au to see all of RIRDC's research projects.

Contact RIRDC

Phone: 02 6271 4100

Email: rirdc@rirdc.gov.au

Web: www.rirdc.gov.au

Pub. No. 13/070