

## Forward focus

Pasture resilience and the ever present issue of climate variability and change and its pressure on pasture persistence and production has become a focus for the FFI CRC. Dr Dear and his researchers are currently investigating ways to make pastures even more climate change resilient.

High on their priority list of research initiatives is how to include perennial grasses and other perennials, such as chicory, in the pasture phase so they complement the lucerne component. There also is the opportunity to look at how perennials contribute to whole-farm system resilience.



*LEFT: Small seeded annual legumes in a pasture mix can increase resilience to climate variability. (Photo: Richard Hayes, NSW DPI)*

“Well-managed perennial pastures have been shown to provide a range of benefits well beyond those associated with increased animal production,” Dr Dear said.

“We need to understand and place a value on perennial pastures that does not purely relate to dry matter production.”

Demonstrating the economic benefits of new perennial species, identifying the land type on a farm best suited to perennial pasture and the optimum area that should be sown to gain the benefits is part of the research the FFI CRC will undertake.

Dr Alison Bowman, who leads the Future Cropping Program in the FFI CRC, said new research within the CRC is aiming to better demonstrate the economic benefits of new perennial pasture species to producers in the mixed farming zones of Australia. Researchers are balancing these benefits against any potential environmental weed risk associated with perennial species.

“In many cases, producers hesitate to try new perennial species because of the higher upfront costs and more difficult management requirements. But the benefits of these plants in terms of pasture persistence and production need to be quantified across a whole farm and a range of seasons,” said Dr Bowman.

The FFI CRC is developing tools to help producers determine the optimum area of their farm to be under perennial systems to gain these benefits. These tools will also help producers pinpoint the land type on the farm that may be better suited to a perennial pasture rather than an annual crop.

Dr Dear believes the economic benefits of perennial pastures should also take into account their contribution to the farm business from a sustainability and importantly, a social perspective.

It is essential to place an economic value on, for example, the sustainability benefits of perennial grasses (including increased groundcover and improved soil structure and fertility) and the potential savings in labour costs that can be attributed to including perennial species in annual-based farming systems.

There is no doubt that research outcomes that assist producers to better manage their farming enterprises during times of climatic variability will be well received and adopted on-farm. ↘

### ➤ More information

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## Proof is in the paddock

It is not just researchers who are witnessing the decline in pasture species during the prolonged drought conditions.

Private agronomist Greg Condon is seeing first-hand the state of pastures in the region.

“Even with decreased stocking rates, there is still a large amount of bare ground visible in the pastures,” Greg said.

“The dry autumn and cold winter have seen a marked decline in pasture growth this season.

“Most pastures are producing less than 10 kg/DM/ha per day due to the lack of groundcover and leaf area. As a result, producers are forced to continue hand feeding stock.”

Regardless of the extended drought, Greg has seen lucerne paddocks that currently have 1500 to 2000 kg DM. This further demonstrates the valuable on-farm benefits of this resilient perennial.

“Lucerne is certainly the pick of the perennial pastures in the south-west slopes, but to the detriment of the annual subclover component,” Greg said.

Even under rotational grazing, chicory and perennial grasses such as phalaris are declining and both subclover and annual grasses are making limited contributions to pasture biomass this season.

With limited cash flow, the high cost of pasture seed for species such as phalaris is seeing little re-sowing of pastures.

Rather than completely renovating pastures, some producers are direct drilling oats and subclover into lucerne. Producers in high rainfall areas are oversowing with short-term ryegrass and clovers such as balansa or arrowleaf.

“Mixed farmers are still undersowing crops with lucerne and shorter season subclover mixes,” said Greg.

“In some instances small seeded annual clovers such as arrowleaf clover have also been added to subclover mixes.”

In the mixed farming areas of southern NSW, some producers have reduced stocking rates in recent years and increased their area of crop. According to Greg, any remaining lucerne pastures are used for backgrounding and agistment before fallowing. This still makes a contribution to the farm system with nitrogen input, weed management and valuable cash flow. And it has relieved the cost of both feed and labour associated with feeding livestock during the current drought.

Producers have also benefited this season from sowing grazing crops such as wheat, triticale and oats. These crops have improved the livestock weight gains and provided an opportunity to rest pasture paddocks.

Farm planning and strategic management decisions have played a key role in the pasture production available during winter and early spring.

Greg says the more positive pasture stories have been particularly seen in sheep enterprises where tight lambing intervals of five to six weeks during late winter/spring and well developed feed plans by producers are paying dividends.

“Producers who have put in drought lots to feed their livestock are seeing the benefits of this management practice to their remaining pasture paddocks.

“The drought lots are providing the remaining pasture paddocks a much needed autumn spell. Winter and spring lambing ewes, which always require additional feeding, can be then turned onto the recently spelled lucerne paddocks.”

Greg has also observed that in the higher rainfall areas, existing lucerne pastures are complemented by the use of native perennial grasses such as red grass and wallaby grass. Producers have recognised the value of these grasses and strategically fenced these areas to enable better pasture utilisation using rotational grazing. ↘

### ➤ More information

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