



# Taking a punt on perennials

With a view to filling their autumn feed gap and preventing erosion from summer thunderstorms, Lyn and David Mathwin turned to perennials almost 10 years ago and as they explained to Josh Giumelli, one of the biggest hurdles to overcome was a lack of information.

“When we started, nobody knew anything about perennial pastures,” Lyn commented. “We just had to try and carry out the research ourselves.

Initially we sowed tall wheatgrass, fescue and cocksfoot – those were the only real varieties available so we just went with them. It was a bit of trial and error.”

“Different species are suited to different areas of the farm. These days, we just throw in a blanket mix and what grows, grows.”

David said a mixture of species has been the key to growing perennials on their farm; “We use a ‘shotgun’ mix. With lucerne, it will grow in some spots, except where it’s too wet – it doesn’t like getting wet feet for too long. We don’t plant for 100 per cent coverage, but let the dominant species take over.”

With sowing rates of a perennial mix ranging 7-10kg/ha, and seed costing \$7-12/kg, it can add up pretty quickly. I think it is one of the reasons why more people don’t invest in perennials.

Apart from our lucerne and tall wheatgrass, we now go with chicory and plaitain, as well as a saltbush plantation.”

## Resting is the key

“One of the biggest keys to successful perennials is resting them,” Lyn said.

## key points

- Different species suit different areas across a single farm
- Resting pastures from grazing will ensure regeneration and seedling recruitment
- Year-round groundcover from perennials helps build soil humus levels
- Perennial pasture establishment is expensive, but the benefits are bountiful.

## farm info.

**Case study:** Lyn and David Mathwin

**Location:** Kojonup, Western Australia

**Property size:** 880 ha, plus share-farm 689 ha, and lease 301 ha

**Mean annual rainfall:** 475 mm

**Soils:** Marri duplex soil, some gravel, pH 4.8 to 5.0

**Enterprises:** Cropping, beef, sheep (meat and wool)



Photos: Josh Giumelli

Groundcover is of utmost importance for retaining soil moisture, reducing erosion, and improving soil humus. INSET: Lyn and David Mathwin.

“Its very, very important. If you want perennials in the landscape, you have to manage for a perennial cycle.

If you manage them like annuals, you’ll kill them. Lots of rest is needed for better production, and ours are so much better since we worked that out.”

“Even so, the tall wheatgrass is tough, and it will take a real hammering,” David said.

“But you’ll end up killing the other species, such as fescue and cocksfoot if you graze them too hard.”

“We want to get our perennial operation to the point where it will regenerate itself in the pasture,” Lyn said.

“We’re not quite there yet but we’re working on it. If we can get recruitment then we’ll be right.

## Keeping soils healthy

We’ve worked hard to improve soil health, and have done a fair amount of soil testing in the past.

We use Western Minerals fertilisers and chicken manure, and have used a microbe seed dressing to inoculate more bugs back into the soil.”

“We applied lime a few years ago to improve soil pH and raise calcium levels, but probably over-applied it a little at rates of 2-2.5 tonnes per hectare,” David said.

“We now apply much lower rates of lime (0.5-1 t/ha) – that way you don’t upset the soil balance.”

“You also need to keep the soil covered, especially during autumn and hot summers so the bugs will survive,” Lyn explained.

“That’s where the perennials come in. They also help build the soil humus levels.

If you’ve got the bugs right and the soil cover right, the pH will soon fix itself.

## Branching out with saltbush

“We planted saltbush with the aim boosting productivity on what was totally unproductive country,” Lyn said.

**Weed Risk Note:** Future Farm Industries CRC advises farmers that tall wheatgrass has a very high environmental weed risk in Victoria.



"It is in its third year now, and was put in with a grant from the Warren perennial project for water and rivers.

It's planted on a salty river flat and doing well, even though at the time the experts were a little divided as to whether it would be a success.

We generally pulse graze the saltbush twice each year for about six weeks prior to lambing in autumn and again during spring, giving the rest of the paddocks a break.

But this year, because it was a late start, to winter we only got the autumn graze.

We are aware of the need to manage the grazing carefully, as we know someone who grazed their's too soon and too hard, and because it was so wet and cold during July it died. But in a good season we'll safely graze twice.

We've put drainage in, and now we're getting regeneration in between the saltbush as the waterlogging has been reduced.

### Reaping the rewards

It's hard to quantify the benefits, but we're definitely ahead with perennials.



Lyn inspects a paddock sown with cocksfoot and fescue.

Our stocking rates have stayed largely the same, but we're making more money than if we'd stuck with the old system.

As an added benefit, the whole farm is a lot healthier for it. Establishing the perennials is expensive, but overall we're still better off.

We've reduced our supplementary feed requirements during summer, and summer rains don't cause the erosion problems they have during the past."

### Looking to the future

"We plan to incorporate more shrubs into the system, such as saltbush and fodder shrubs," Lyn said.

"We'd also like to sow more summer actives as well, but haven't really played around with them too much yet."

"We started off sowing our pastures with an old combine," David said. "These days we use knife points."

"Another future direction for us is pasture cropping and we may look at a disc machine for sowing both our crops and perennial pastures, although they are pretty expensive.

Discs would be great for sowing crops straight into pasture, as the tines can tend to rip out the big perennial clumps if the soil is loose.

There's still so much to learn as its a huge field, even though we've been doing it for 10 years now – luckily now there is a lot more advice available these days."🌱

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By by Paul Omedei, AgVivo

science behind the story

- When it comes to perennials, David and Lyn Mathwin epitomise what producers are required to do to make them a success. Planning, small farm trials, seeking information and preparedness to change are just a few of the points that come to mind.

The Mathwins have had a strong focus on right plant, right place and this has underpinned their success with perennial persistence. The practice of 'shotgun mixes' has proved very successful as different species perform better (or worse) in different soil types. Over time, the change in species persistence and survival of the fittest will become evident, so the 'right' mix does eventually occur on the different soil types. Producers can fence as best they can to soil type, but in this region of WA, there can still be variation within 10 metres – it

is difficult to fence exactly to soil type. Rather, the Mathwins have fenced to land management units, which provides greater control over their perennial areas.

A grazing management plan is what is required for perennials and the Mathwin's have certainly grasped this concept well. Perennials simply need a rest after grazing, some more than others, such as saltbush, and to do this is a key skill a producer requires. If perennial pastures can not be rested in a livestock system then don't grow them – it's as simple as that.

The Mathwin's new saltbush area has shown what can happen when a key focus on grazing management is maintained. It is a great example of letting nature take its course. We now see many other species within the saltbush rows coming back into the mix. Firstly, barley grass, some patches of clover and even ryegrass. Even though barley grass is not a preferred

species of choice for sheep grazing, it is better than bare patches of nothing.

The Mathwins will trial other species within these rows, such as tall wheatgrass, chicory and plantain. With the long grazing rest or 'pulse' grazing strategy used in the saltbush area, species like this will have a chance to set seed and the inter-rows will improve in density with time. Perhaps not too long into the future we'll see the salt scalds completely disappear. This would truly be a success.

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