



Spanish cocksfoot leads the way

Following three years of drought, which left most existing pastures seriously degraded, Humberston McKenzie, Fingal Tasmania, wanted a pasture species that would be productive, drought and frost tolerant, could stand up to pests, and not be a toxicity risk to his stock.

"I had heard impressive stories about the performance of a new cocksfoot variety recently developed by the Tasmanian Institute of Agricultural Research (TIAR) and decided to dip my toe in the water," Humberston said.

"We first tried a seed trial plot a few years ago, but the grass didn't establish because it was sown too deeply.

We planted about eight hectares of Uplands cocksfoot during April 2009, primarily as a commercial seed crop, but also to provide valuable grazing for the stock during winter. This time the seed placement was more accurate and closer to the soil surface, which I think is important for success – germination was excellent.

The exercise has given me an appreciation of what this new grass is, what it can stand up to, and what it can do.

Patient persistence

After sowing I made the common observation that the grass was somewhat 'slow out of

key points

- A new cocksfoot variety is proving resilient to drought, waterlogging, cold temperatures and grazing, without posing a toxicity risk to livestock
- Re-establishment with persistent perennials after the drought is a priority as they are low-cost stockfeed
- Winter-active grass species such as cocksfoot, respond swiftly to summer rains and a variable climate
- While the variety is slow to establish, patience pays off with bountiful dry matter production when the pasture is well established.

farm info.

Case study: Humberston and Toni McKenzie

Location: Fingal Valley, Tasmania

Property size: 2000 ha

Mean annual rainfall: 600 mm

Soils: Shallow alluvial duplexes (kandosols) with moderate fertility on flats, shallow low fertility calcarols on slopes and bush-runs

Enterprises: Mixed farming – wool, first-cross prime lambs (4500 DSE), beef (2000 DSE) grains, poppies and pasture seed



Photo: Catherine Nicholls

Tasmanian producer Humberston McKenzie (pictured) is an avid convert to the new Spanish cocksfoot Uplands cultivar, which is gathering significant interest not only in Tasmania, but also in the southern mainland states.

the blocks' compared with other commercial species we've used in the past. Not discouraged and remembering the words of TIAR researcher Eric Hall, 'be patient with this grass', I watched as the paddock became saturated with the wettest Tasmanian winter-spring rains since World War II.

During the August-September period, we received 246 millimetres of rain and the 'slow starter' was now producing more than 3000 kilograms per hectare of estimated dry matter, standing in water and still growing.

Grazing was the next logical step. During October, we fenced off the block for more

than a fortnight to 80 yearling heifers and 400 Merino wethers.

The grass was chewed into the ground and left in what I can only be described as a muddy mess.

My expectation was that I might have overdone it, and the paddock wouldn't recover – however, recover it did, even better than before.

Follow-up management

I irrigated the paddock during November 2009 and applied nitrogen at a rate of 20 kg/ha.



I harvested the paddock for seed at the end of January 2010. February rains after harvest saw this winter-active species continue to grow.

By the first week of March, I estimated there was about 3000-4000 kg/ha of dry matter across the paddock.

The plan was to run the windrow header a second time during early March to maximise seed yield. But such was the bulk of dry matter production during this six-week period, the grass had to be cut under the windrows to run them through the header again.

Looking to the future, I reckon I will sow a lot more of this grass across the farm. TIAR research has shown it to be tough, surviving the driest time people can remember in parts of the State.

It has shown me the grass can take a fair bit of waterlogging too, it doesn't have the associated toxicity issues like some of the other grasses, such as perennial ryegrass and phalaris and appears to be reasonably resilient to grub attack.

Maybe soon we'll see more people dancing to the tango of the Spanish cocksfoots!!!" 🌱

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Two-week growth after harvest shows the substantial feed potential of Spanish cocksfoot. INSET TIAR Research Agronomist Eric Hall (left) and Humberston McKenzie (right), discuss the seed crop of Uplands Spanish Cocksfoot at 'Speyside', Fingal, Tasmania.

Photos: Carrilona Nicholls

science behind the story

By Eric Hall, TIAR

- **There are several factors limiting pasture production in the eastern half of Tasmania, including low winter temperatures, pasture grubs and low rainfall. One of the major concerns is the decrease in annual rainfall during the past 20 years.**

Some areas now regularly receive only 70 per cent of their long-term average annual rainfall and drought conditions have become a regular occurrence.

The changing climatic conditions experienced across the region mean perennial ryegrass, the dominant perennial grass species sown, is no longer suitable and producers need to look to better-adapted perennial grass species.

In response to this need, TIAR researchers have bred and commercially released two Spanish cocksfoot cultivars UplandsA and SendaceA.

The new cultivars have much finer leaves than 'traditional' cocksfoot cultivars and are densely tillered. They are highly drought and cold tolerant and endure a high level of pasture grubs. The cultivars can shut down during summer when moisture is lacking, but will respond rapidly when the autumn break arrives, growing actively through to late spring.

This allows them to produce a large bulk of high-protein, high-energy, digestible and nutritious forage.

An EverGraze® Supporting Site in Tasmania demonstrates these new cultivars of Spanish cocksfoot. The Site is about two hectares and was established under extremely difficult conditions.

The successful establishment of Spanish cocksfoot here demonstrates the suitability of this grass to establish in a challenging arid environment.

The key messages when sowing these new Spanish cocksfoot cultivars are;

- sow shallow, less than 10 mm and
- be patient, the seedlings are slow to get going, but when established they will be there for a long time.

EverGraze – More livestock from perennials is a Future Farm Industries CRC, Meat and Livestock Australia and Australian Wool Innovation research and delivery partnership.

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Weed risk note: CRC weed risk assessment of Cocksfoot, *Dactylis glomeratus*, has indicated it is a high weed risk in parts of WA and a medium risk in parts of SA, Vic and NSW. Care should be taken to minimise the weed risk to the native environment.