



Perennials are set to tussle with the tussock

A changing climate has seen serrated tussock become a significant challenge for farm manager, Philip Bush, Goulburn NSW. Perennial pasture establishment could hold the key. Philip shared his tussock management strategy with Catriona Nicholls.

“Drier winters and out-of-season summer rainfall, combined with several years of drought have seen serrated tussock thrive on *Chatsbury*,” Philip said.

“We’ve looked to improved perennial pastures to find a solution.

I recently looked at our historical rainfall records and the average annual rainfall since 1890 is about 860 millimetres. But for the past seven to eight years we’ve struggled to reach 600 mm.

Traditionally we would get wet winters and the tussock doesn’t like wet feet, so it didn’t become a significant problem. But I think the combination of recent dry winters and summer rainfall, with some possible overgrazing due to drought, has allowed tussock to get away.

Competitive approach

Much of the country here is steep and unarable and has been under native pastures – predominantly microlena. The challenge was to remove the tussock and replace it with something more competitive under a changing climate.

The native pastures have been terrific for grazing, but although I didn’t want to lose them I had no alternative – the only way to get rid of the tussock was to spray it out.

Our approach has been to spray out the tussock and unfortunately this chemical control option is severe on the native pastures.

key points

- A change in rainfall pattern has seen serrated tussock thrive and out-compete existing native pastures
- Establishing perennials could bring an end to the problem
- A perennial combination is set to provide year-round feed in a changing climate.

farm info.

Case study: Philip Bush

Location: Goulburn, New South Wales

Property size: 4000 ha

Mean annual rainfall: 860 mm

Soils: Basalt and granite

Enterprises: Sheep, cattle and cropping for stock feed



Photo: Julian Minehan, Landmark

Philip uses a rock hopper disc seeder to establish perennial pastures after spraying in Chatsbury’s rockier tussock-filled paddocks.

We sprayed with Taskforce using a helicopter during late winter-spring and left the paddocks during summer, for the tussock to die out.

During the past we have had trouble sowing the hill country down with a tyned implement – it had difficulty handling the stony country.

After a trip to Henty field days we invested in a rock hopper, which is a disc machine that can roll over the rocks.

We follow up the initial winter-spring spray during mid-to-late autumn with roundup and then direct drill the pastures using the rock hopper.

I’ve chosen a mix of phalaris, cocksfoot, subclover and white clovers, which complement our lucerne country to provide year-round feed.

Depending on rainfall, I hope to graze the newly-established perennial pastures during spring. Last year we didn’t get rain until Christmas, so this initial grazing was delayed.

We are working our way through a pasture-improvement program and currently the property is about one-third improved pastures and two-thirds native pastures.

Lucerne for lambs

We currently have 70 hectares of lucerne pastures to complement the more winter-active perennial species.



Photos: Julian Minehan, Landmark

Before sowing a competitive pasture mix Philip sprays out the tussock with Fluproponate (Taskforce) INSET: Lucerne provides a valuable pasture option for finishing lambs during summer.

There has always been a small amount of lucerne on the place, but we've increased this recently to allow us to finish our lambs.

Increasingly dry winters and the odd fall of rain during summer has meant we haven't had rain at the right time for our traditional pastures.

Rain during late spring often just leads to the grasses, such as phalaris, running to head, whereas rain during the warmer months sees lucerne respond rapidly.

We sow the lucerne during spring and hope to be able to graze it for the first time around Christmas.

Our cross-bred lambs hit the ground during June-July so we wean during spring.

We tend to wean the lambs onto the grass-based pastures to let them settle and then move them onto the lucerne during November to finish.

The lamb market has changed and now demands heavier lambs more quickly.

Lucerne allows us to turn off lambs quickly at about 48 kilograms liveweight (21 kg dressed).

We haven't had any problems grazing any of our pastures and lambs don't scour on the pastures compared with the cereal crops.

I think the challenges occur with grazing species such as lucerne and phalaris when there is a flush of growth – not something that has been a big issue these past few seasons.

We rotationally graze our stock, although stock movement depends on pasture availability.

Many of the paddocks are large (up to 200 ha) and we are working through a subdivision program to allow us to better manage our pastures and livestock.

I'm keen to bring paddocks back to an average size of about 40 ha.

At this stage, I think perennials will help us beat the tussock problem, it seems to be working so far, but it is still a work in progress." 🌱

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science behind the story

By Julian Minehan, Landmark

- **Serrated tussock is now a major problem facing farmers in the Southern Tablelands of NSW. It's prolific growth, unpalatability to stock and ability to produce massive amounts of seed (one mature plant = 100,000 seeds per year) under harsh conditions, makes control extremely difficult.**

The approach Philip Bush has taken on *Chatsbury* uses an integrated control options. Phil sprays out the tussock with Fluproponate (a selective herbicide) and is sowing competitive perennial pastures when moisture is available.

Successful tussock control requires the establishment of such pastures and follow up chemical control of new seedlings.

The perennial combination Philip is using includes a mix of phalaris, cocksfoot and clovers.

This combination will provide winter, spring and summer feed. The selected pasture species also can handle adverse conditions and out compete the tussock.

The addition of lucerne to Philip's grazing system has provided a valuable protein source during summer to finish lambs and also provides the option of cutting hay to feed out during the colder months.

Philip's lucerne is certainly the talking point of the district. The focus on timely weed control and replacing nutrients removed through grazing and hay production has encouraged persistent and healthy stands of winter-dormant lucerne. One particular stand is seven years old and still has high plant numbers (40-50 plants per square metre). This impressive stand can carry 13 dry sheep equivalents per hectare during summer producing lambs with an average weight gain of 250 grams per head per day.

The past 10 years have been extremely difficult in this region, with the lack of rain and the rising costs of production. However, Philip remains positive and believes an integrated approach to tussock control is working. His progressive and successful approach is encouraging for neighbouring producers.

- **Julian Minehan is a Landmark agronomist based in the Southern Tablelands region of New South Wales.**

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