



The GRDC Southern Region Pulse Extension Project began in 2017 and is delivered by a consortium of organisations involved in the pulse industry, including Upper North Farming Systems.



Focus: frost, heat, drought

Interview date: June 2020

Lentils aren't as difficult to grow as they sound – that's the major lesson Yorke and Mid North farmer Brad Dennis says he learned in his first three years of growing the crop.

"Given the right conditions, we can grow them in these really marginal areas on the right soil types," he says. "That's the biggest thing for me."

Brad admits the foray into high-value legume crops was initially daunting, having focused on producing cereals and vetch for grazing in the decade since he returned to the family farm at Baroota, north of Port Pirie on the east coast of the Spencer Gulf.

"We thought we're not going to have too much joy out of it," he says. "Then we saw the neighbour getting on pretty well. And we thought there weren't too many reasons we couldn't have a crack at it."

Now in his fourth year of growing Hurricane XT lentils, Brad says the main differences to cereal crops are the extended fungicide program and the emphasis on preventing insect damage to the small red lentils that are destined for the premium food market.

"You have to really be on top of all that or you'll end up with a product that's not really saleable for anything but animal feed," he says.

Brad, who works alongside his brother Matt, their father Robbie and grandfather Peter, says they began looking for a break crop that would provide better returns about five years ago. Lentils caught their attention when prices topped \$1200/tonne in 2015.

OWNERS

Matt and Brad Dennis
Robbie and Michelle Dennis
Peter and Bev Dennis

LOCATION: Baroota, South Australia

FARM SIZE: 5200ha owned and leased, 4000ha cropped

ANNUAL AVERAGE RAINFALL: 325mm

SOIL TYPES: red sands to heavy red clay

ENTERPRISE MIX: cropping and livestock

CROP PROGRAM (2020): Cereals 67% (Grenade CL Plus, Scepter and Vixen wheat, Fathom and Spartacus CL barley), legumes 32% (PBA Hurricane XT lentils, PBA Twilight field peas, Morava and Rasina vetch)

LIVESTOCK: 2000 Merino ewes and crossbred lambs

TYPICAL ROTATION: wheat-barley-legume

MORE INFORMATION

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“We need a break crop and we were trying to get out of running as many sheep as we do on some of our better soils,” Brad says. “We think we can make more money out of lentils too, in an average or above average year.”

The Dennis family runs about 2000 Merino breeding ewes producing crossbred lambs, and 1800 wethers for wool. They grow vetch for grazing and previously produced field peas for about 20 years before taking a five-year break.

“We went right out of growing pulses for grain crops because we couldn’t get the yields and had a lot of issues,” Brad says. “With the tight finishes up here, we were losing all the flowers in the heat and that was affecting yield. The price of sheep and lambs steered us back into sowing more vetch for feed and we got right out of peas, but we’ve got back into peas and lentils in the last three or four years and increased the overall area sown to pulses.”

Other farmers in the area also have added field peas and lentils to their rotations. Some grow lupins as well but the Dennises found they struggled, especially in the heavier, more alkaline soils at Baroota.

Just as Brad was preparing to sow his first crop of lentils in 2017, the Napperby Pulse Check discussion group was established as part of the Grains Research and Development Corporation (GRDC) Southern Pulse Extension Project.

“It’s been good for learning what to look out for,” Brad says. “There were all these fresh lentil growers around and we needed a bit more knowledge about it and to do some more testing. One of the best parts is getting out and looking at other people’s crops and having a chat about what they’re doing; what’s working for them and what’s not.”

Thanks to the discussion group, Brad says he now has a much better idea of timing for insecticide and fungicide application, chemical safety and rates, and the influence of soil type on results.

“Lentils need a bit of work, but not as much as we thought,” he says. “We haven’t had much trouble with weeds and pests.”

The only real disappointment came in 2018 when the lentils were smashed by relentless strong winds. After two years of below average rainfall, the crop was light and lacked sufficient bulk to support the canopy while waiting for a contract harvester to arrive. Half the expected yield was lost. Eager not to repeat that experience, the Dennises last year changed their draper header front to a flex front so they can harvest the crop themselves as soon as it’s ready to go.

Average annual rainfall for nearby Port Germein is 325 millimetres. The 2018 rainfall tally reached just 170.5mm and was followed by 199.6mm in 2019.



“We didn’t have much sheep feed,” Brad recalls. “We were feeding sheep for a fair while, but the crops were still pretty reasonable because we had some summer rainfall that we managed to conserve. Aside from that, we’ve been pretty lucky – for the past nine or so years we haven’t really had too many shockers.”

Hot northerly winds at flowering can be a challenge when growing any legume crop. Losses can be reduced by sowing earlier and choosing shorter season varieties.

“But I don’t think we can completely avoid that every year,” Brad says. “Some years we’re just going to get knocked around like that. The Hurricanes seem as good a variety as any for our environment.”

Frost is not a major concern at Baroota, although the 2019 field pea crop lost an estimated 0.6-1t/ha of yield from a combination of aborted flowers and shrivelled grain in pods that failed to fill. Lentils seem to be more resilient, Brad says.

The Dennis family, who will celebrate a century on the land at Baroota in 2021, have operated their farm on minimum till principles for the past 20 years. The only cultivation occurs occasionally on some of the country where they run sheep.

The standard three-year rotation has changed from “three cereals and a break” to wheat-barley-legume, depending on weed issues and soil type. The main problem weeds are barley grass, ryegrass, statice, wild turnip and clover. Cereal crops and vetch are usually sown onto the heavier country which yields good sheep feed in a year of average or above average rainfall.

Despite their recent success with lentils and field peas, Brad says they’re not really thinking about trying other pulse crops.

“We’re still running sheep and all our heavy ground, that’s not suitable for lentils, we’ve just sown vetch on it to graze,” he says. “Chickpeas might be an option, but we’re sticking with the vetch, lentils and peas for the moment.”

The 2020 cropping program totals about 4000 hectares. It includes 1300ha of Fathom and Spartacus CL barley and 1400ha of mostly Grenade CL Plus and Scepter wheat, with some Vixen being bulked up for seed. There’s also 700ha of Morava and Rasina vetch, 200ha of Twilight field peas and 400ha of Hurricane XT lentils.

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