

GRDC NORTHERN PULSE CHECK



Speaking from experience... a pulse grower case study

Improving soil health with winter pulses



Excellent emergence with planting rate of 80 kg/ha

For John and Fiona de Wit, good soil health is a priority, and pulses provide a great way for them to improve and maintain soil health. The de Wits have found chickpeas, as with many pulses, are good soil conditioners and fix nitrogen for following crops to access.



SNAPSHOT



Grower: John & Fiona de Wit

Property: Farms 1309 & 1307

Location: Whitton, NSW

Farm size: 364 ha

Long-term average annual rainfall: 415 mm

Soils: Grey self-mulching clays

Soil pH: 6.3

Enterprise:

Irrigated broadacre cropping

Cropping mix:

Chickpeas, cotton and sorghum

The de Wits farm at Whitton in the Murrumbidgee Irrigation Area (MIA), and they wanted a winter crop they could grow with no spring irrigations, so as to save water for their summer crops. In 2020, John and Fiona grew 110 ha of chickpeas rather than winter cereals, a decision driven largely by economics.

“In the wetter seasons such as this one we’ve just had, irrigators can afford to irrigate their winter crops,” John explains.

“The commodity price of grains however tends to weaken when there is good seasonal conditions and a lot of grain around.”

This is the second crop of chickpeas the de Wits have grown and, so far, they haven’t encountered too many difficulties. With weekly site visits from their agronomic advisor Emma Ayliffe from Summit Ag, disease, insect and weed control was kept well in hand, with three fungicides and two insecticide sprays applied. There is concern that chickpeas can promote and harbour black root rot, which will impact the main summer crop of cotton. They have overcome this concern by taking greater care with paddock rotations.

Sowing dates and rates

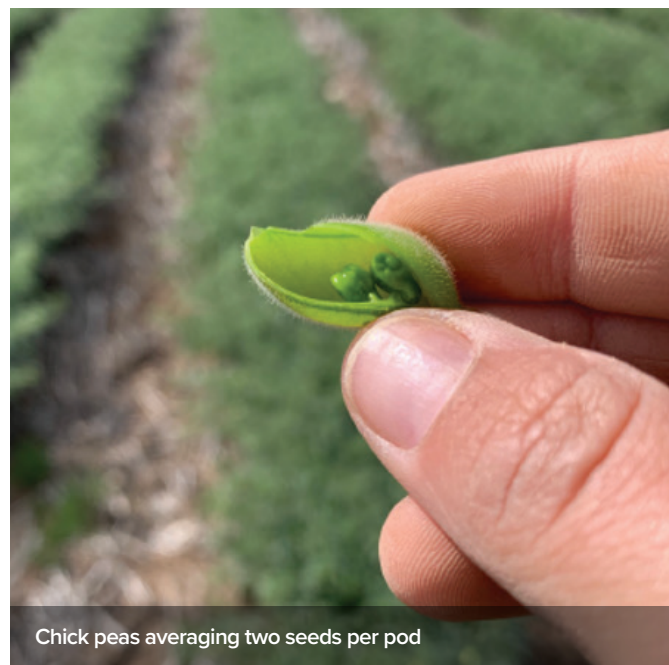
In early June, John planted Seamer chickpeas at 80 kg/ha into last year’s cereal stubble and good soil moisture. The layout was 1 m rows with shallow furrows, as he chose not to renovate the hills from last season’s crop.

“If I had planned to irrigate the crop, I would have made sure to have a decent furrow to ensure good drainage,” he said. “We were lucky the 2020 winter was reasonably dry, so we got away with shallower furrows.”

The seed was inoculated with liquid inoculant, but John plans to change to a peat inoculant on seed this coming season. The 80 kg/ha planting rate proved to be too high, as they all seemed to germinate and establish.

“Next season, we’ll cut back to more dryland rates of 50-60 kg/ha, as plant stand was very thick,” he said.

The chickpeas were sprayed with glyphosate in early November to desiccate the crop, and harvest commenced in late November, carrying over into early December. The chickpeas were stored on farm and sold in February 2021 at an improved price on harvest prices.



Chick peas averaging two seeds per pod



Beat sheet used to monitor for insect numbers



Ready for desiccation



Marketing pulses

With a yield of 2 t/ha, the small volume has made marketing a little more challenging. Larger volumes across the region would assist with the ready marketing of chickpeas. Despite that, the de Wits say, “We plan to continue growing chickpeas and would encourage others to try growing them as well.”

John said, “It’s great to have another crop option that not only improves soil health, but is also a low-input crop, which is handy in low-allocation years. Also, having more people grow them would give strength to marketing.”

Pulses have a very big future in feeding people as they diversify from animal-based proteins to plant-based proteins as an alternate food source. “The eating habits of consumers are changing, and we are excited to be a part of that,” Fiona said.

The GRDC Northern Pulse Check project supports and develops strong profitable pulse production systems across the GRDC Northern Region. It seeks to engage with grower, researcher and industry stakeholders to encourage greater sharing of information, through a range of pulse-related extension and communications activities.

