

RISK AND REWARD EARLY SOWN CANOLA

Grower case study: Boyd Carter



Soil moisture is the main driver for early seeding decision-making for Wubin grower Boyd Carter.

Photo: Boyd Carter

SNAPSHOT

Grower: Boyd Carter
Location: Wubin, Western Australia
Average rainfall: 280mm
Farm size: 8500ha (east of Wubin)
Enterprises: wheat, barley, canola, lupins, faba beans, serradella and sheep
Soil types: sandy loam to deep red loam

Boyd Carter farms 8500 hectares east of Wubin with his parents, managing an enterprise mix of wheat, barley, canola, lupins, faba beans and serradella. They also trade sheep opportunistically to support their rotations.

The Carters have been growing canola since 1996 and increased the area cropped from seven per cent to 15 per cent in 2022. Early rainfall opportunities have been a big factor in the increase in canola plantings in their area, along with the influence of price.

From 2020 to 2022, Boyd has seeded

canola in March, noting the advantages of warmer days on establishment if moisture is available. The decision around March seeding is typically made based on the forecast of rainfall and subsoil moisture.

“We want to get to the four-leaf stage as soon as possible, as canola is pretty hardy after that point,” Boyd says. “Warmer weather helps the plant get early vigour, which is an advantage of early sowing if you have the moisture.”

In 2022, the Carters did not have significant summer rainfall totals, but

received 20 millimetres of rain in February, which, coupled with subsoil moisture carryover from 2021 and a 10mm rainfall event in mid-March, was enough to trigger the start of their canola program.

They started seeding at the end of March and a week later received 20–40mm of rain from an ex-tropical cyclone system.

The Carters have learnt to trust their knowledge and experience to make early seeding decisions. “In the past, the early stuff we have put in has performed well,” Boyd says. “We have also found if you don’t go that early, you often still get the same or worse results, and it then allows the rest of the program to be sown in a timely manner too.

“We have found yield is often impacted more by the heat stress at the end of the season, so going early sometimes provides more growing time.”

MANAGING EARLY SEEDING RISK

Managing risk in a farming business is challenging, particularly in low-rainfall regions where the Carters farm. Boyd has employed two key strategies to manage the risk of seeding canola early.

First, he uses a 50:50 retained open-pollinated (OP) seed and pedigree triazine-tolerant (TT) seed mix on the paddocks that go in first. This reduces the up-front seed cost risk.

To enable this strategy, the Carters will always seed at least one paddock with 100 per cent pedigree TT to ensure good-quality viable seed for the following year. Their retained seed is stored in a temperature-controlled air-tight shipping container, which is set at a consistent 24°C. The canola program is then continued with a mix of Roundup Ready® varieties of different season lengths.

Second, Boyd uses a machinery utilisation strategy that considers the different crop types. The Carters have two seeding bars and two boom sprayers. Both seeding bars are deep blade systems (DBS), but have different seed boxes. The Simplicity seeding box cannot achieve low seeding rates, so is used for the retained seed mix that goes out at the higher rate of 2.2–2.5 kilograms per hectare. The smaller Bourgault seed box is used for all other varieties as it can get down to 1.2–1.8kg/ha.

Boyd notes the importance of having two boom sprayers, saying “it would be difficult to manage the early canola (with earlier post-emergent sprays) while seeding our cereal program. We have one boom sprayer completely dedicated to the canola program”.

WHEN THERE'S NO SUBSOIL MOISTURE

If there is no subsoil moisture from summer rains, the Carters will start seeding dry in mid-April. They will also consider changes to their program, such as reducing canola plantings, if it is still dry at the end of April as they do not want to affect their cereal seeding program.

“Normally we want to finish our canola program by early/mid-May as after that you run the risk of impacting other parts of your cropping program,” Boyd says.

WHAT THE CARTERS HAVE LEARNT

The Carters have learnt a lot about growing canola in the past five to 10 years that has helped them increase their hectares grown. Some of the key learnings include understanding how canola and different varieties perform on different soil types, experimenting with rotations and using new technologies for weed control.

“We have always kept canola off our red ground as it has too much early vigour and dries out quickly with the clay content in the soil, leaving us with a big crop and no yield,” Boyd says. “However, some new varieties have the potential to handle it better, so we are trialling again in 2022. Our best canola results are on sand over gravel soil type.

“We have also started growing canola on a lupin stubble, which is reducing some of the fertiliser inputs and helping with grass control by enabling a double break from cereals.”

Another way the Carters manage the risk of going early is to vary the depth of seed placement based on the conditions.

“We vary the seeding depth when sowing canola so as to not put all our eggs in one basket,” Boyd says. “So, every third seeder run will either be shallower or deeper depending on the moisture position in the soil. We don’t want the seed sitting just in the moisture, we either want it in dry or 50mm into the moisture. This ensures we spread

the risk and don’t get total germination failure in a paddock, but it’s still a work in progress.”

HARVEST

The 2022 season created challenges for the Carters with harvesting their canola, resulting in them taking a different approach.

“Normally we swathe our canola; however, in 2022 we had to desiccate the canola and direct harvest it, which is not our normal practice. We were finding some areas were ready while others were still green with some individuals even re-shooting, potentially due to mice damage.”

Following harvest, the preferred variety is now Nuseed® Emu TF for RR and HyTTec® Trident for TT, as the Carters were most impressed with both the vigour and the yield of those varieties in 2022.

FUTURE PLANS

Going forward, the Carters will continue to manage their risk when making decisions about their canola program. Their plan will depend on whether a large early rainfall event occurs or if it is a marginal start to the year. For 2024, the plan is to decrease the amount of canola sown and seed it onto pasture paddocks, in order to minimise their susceptibility to cost-based risks.

“By sowing into pasture, there is likely to be more moisture available, but it also gives us a chance to make up the profit for the year it was out. Same with our soil amelioration operations; we generally get a better crop after ameliorating the soil, so to make that cost back we try to sow canola onto those areas.”

The Carters will continue to use a 50:50 ratio of retained OP seed and pedigree TT seed to diminish their reliance on canola seed availability – an issue many growers are facing.

In terms of trialling new varieties, Boyd will await the results of the canola National Variety Trials (NVT), which happen to be sown on his farm this year.

The results will hopefully provide insight into which varieties handled the drier conditions best.

The NVT results, as well as Liebe Group’s early sown canola trial results, will aid growers in planning their canola programs while managing the risks associated with going early.

	Time of sowing 1 (early)	Time of sowing 2 (normal)
Paddock name	S5	C9
Variety	HyTTec® Trident	Hyola® Garrison XC
Sowing date	28 March 2022	5 April 2022
Rainfall at sowing	Better summer rainfall – likely 20mm more than C9	45mm
Comments (9 June 2022)	80% flowering	30% flowering
	Good germination	Good germination
	Sandy gravel	Red ground paddock
	More mice activity	
Comments (26 August 2022)	80% flower drop	90% flower drop
	Seems like it's flowered three times	Most plants 0.8 to 1.5m tall
	Most plants between 0.8 and 1.3m tall	Best of the crop is where the Bednar was used
	Podding starts at about 12cm off the ground	Podding starts between 12cm and 15cm from the ground
		Dense podding
Nitrogen applications	50L Flexi N early August	50L Flexi N early August
Yield	2t/ha	2.12t/ha



GRDC PROJECT**LIE2204-002SAX**

The Liebe Group growers identified a lack of data in sowing canola before mid-April in the north-eastern grain growing region of Western Australia. To address these concerns, GRDC invested in a two-year 'NGN risk and reward of very early canola' project to help growers better understand the risk and reward of sowing canola early and the decision-making process and logistical challenges with sowing times and varietal choice. As part of the project, trials were set up in 2022 and three growers (Mike Dodd, Dylan Hirsch and Boyd Carter) recorded their trial results.



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