

SACOA UPDATE

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One of best crop germinations ever for Fowlers

DESPITE less-than-ideal growing season rainfall, Mark Fowler is declaring it one of the best crop germination years he has ever seen on the family's properties near Williams and Harrismith.

For the first time, this year the Fowlers banded SACOA's unique SE14 soil moisture attraction and retention agent at seeding, a new addition to their overall strategy to improve and optimise germination that already includes deep seeding, edge-row sowing, high seeding rates, narrow row spacing and, eventually, soil amelioration.

"And it wasn't just the germination that was better – my feeling is that early seedling vigour has improved as well," Mr Fowler said.

"In a year of below average rainfall, there has been better access to moisture and nutrition because the furrows have been wetter for longer."

"With our hay crops, evenness of germination is particularly important as it means we can cut our hay at the best possible growth stage to optimise quality, rather than delaying cutting because parts of the crop with a later germination date have not yet progressed passed booting."

"This, in turn, leads to faster curing, which leads to better quality hay and reduced risk."

"SE14 is really just another tool and we will see how it translates to dollars, but it looks pretty compelling at this stage."

Mark and his wife Tish, together

with his parents, Doug and Jenny, crop 4230 hectares to barley, oaten hay, oats and canola, with the program spread over several properties around Williams and Harrismith.

They also run 3000 sheep, excluding lambs.

About 40 per cent of their ewe flock was sold to Eastern States restockers this year.

White gum gravel soils at Williams, including ironstone ridges and granite valleys, present some non-wetting issues, but due to good clay content, not to the extent of red gum gravel soils in the region.

At the Harrismith properties, soils are more variable and include gravelly sand over clay, as well as York gum and red morrel, with heavier loams.

Many years of dry sowing and a poor germination outcome last year, due to the long dry summer, turned the focus onto the SE14 moisture agent this season.

"With the changing weather patterns, getting crops germinated and established early while the soil is warm and to allow for a longer growing season for higher yields, is critical, especially for hay," Mr Fowler said.

"We have two cleaning crops in our main rotation of canola-barley-hay, so a knockdown is nice, but not necessary."

"We don't focus on when we start seeding, but rather when we will finish."

"With our program, which involves a lot of shifting around between farms



Williams grower Mark Fowler looks over some of the family's hybrid, triazine-tolerant canola dry sown into a pasture paddock using a paired row seeding boot at 2.5 kilograms per hectare. It was sown with SACOA's SE14 soil moisture attraction and retention agent at 3 litres per hectare, also applied with trace elements and fungicide.

that are up to 140 kilometres apart, that means that we commence at the start of April, go around the clock and aim to be finished by mid-May."

However, he said the dry seeding exacerbated the stratification of soil particles, culminating in more non-wetting issues.

"With the dry summer last year, the fats and waxes on soil particles also were

not broken down by microbial activity," Mr Fowler said.

"It can be hard to germinate canola in these circumstances and even oats for hay seeded at 150 kilograms a hectare may not germinate evenly."

He said having their two seeders already set up for deep banding urea, made it a relatively easy proposition to

band SE14 with the seed, together with trace elements and fungicide.

A 19,000 litre, Morris 9535 air cart, and 18 metre John Deere 1830 air hoe drill, is pulled by a Case 550 tractor, at Harrismith, while the Williams rig comprises a 12,000L Simplicity cart and 12m Morris 9000 bar, pulled by a New Holland TJ375 tractor.

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□ Staggered canola germination in a seeding run at the Fowler family's Williams property that did not receive SACOA's SE14 soil moisture attraction and retention agent.



□ Clear canola germination benefits where SACOA's SE14 soil moisture attraction and retention agent, together with trace elements and fungicide, was banded with the seed and compound fertiliser at the Fowler's Williams property.

A double chute air kit and Stiletto paired-row seeding boot delivers the seed and compound fertiliser, as well as the urea spaced 65 millimetres away, both to the side and at depth.

The SE14, trace elements and fungicide are fed from a 6000L tow-behind FarmKing liquid cart and plumbed at the back of each paired row to be banded directly with the seed and compound fertiliser.

The edge-row sowing is assisted by a ProTrakker hydraulically-controlled guidance hitch and the Fowlers also seed deeper to chase moisture, using a 25 centimetre row spacing, as well as the paired boot and high seeding rates to help optimise crop establishment and weed competition.

Barley is sown at 75-100kg/ha, canola from 2.2kg/ha with hybrid varieties up to 3.5kg/ha for open-

pollinated cultivars, and oats at 150kg/ha.

MAP fertiliser is used at the Harrismith properties at 55kg/ha and urea at 80kg/ha with hay, 60kg/ha with barley and 50kg/ha with canola, while at Williams, MAP is substituted for K-Till Extra fertiliser at 125kg/ha.

Due to their hay and straw programs, all crops are top dressed with high rates of muriate of potash, mostly at 100kg/ha.

Seeding depths include barley at 3-6cm, oats at 4-8cm and canola at about 2cm 'matchbox' depth.

At the Harrismith properties, SE14 was banded with the more difficult-to-germinate crops, canola and oats, as well as with some of the barley on problem paddocks.

With the more non-wetting gravels, but higher yielding land at Williams, it

was banded with all crops and at rates from 1.5L/ha up to 4.5L/ha to assess rate responses, but 3L/ha was the predominant rate.

The SE14 was applied with 60L/ha of water, however, Mr Fowler said their local agronomy group had identified benefits from using higher water rates and, hence, he expected to lift the rate possibly up to 100L/ha, also considering their paired row seeding system.

The Fowlers also left areas where SE14 was not applied and in various cases the establishment differences were stark.

Mr Fowler said in some of the worst germination conditions at Harrismith, it was noticeable where SE14 was not used with the barley and he anticipated using it with a lot more of his barley from next season.

"Where it wasn't applied, the barley

didn't germinate as well as the oats," he said.

"Normally it's the other way around."

At Williams, good summer rainfall of 45mm was received during February, followed by 18mm in March, however during April, when canola seeding commenced on April 6-7, just 2mm was recorded on April 5, 3.5mm on April 19, and 1.8mm on April 22.

"It was completely dry and dusty at sowing and we were not expecting any germination, but quite a lot of crop came up after the 3.5mm, which we put down to the effect of the SE14," Mr Fowler said.

"We were a bit alarmed because we thought the germinated fraction might die without any proper soil moisture.

"Fortunately, 36mm was received on May 4.

"The earlier summer rains may have increased microbial activity on the soils to break down the fats and waxes on soil particles which causes the non-wetting, but not in our wildest dreams would we expect to germinate any crop on 3.5mm."

"We sowed hybrid TT (triazine-tolerant) canola into a dry pasture paddock at 2.5kg and when it came up it looked like it had been sown at 4kg."

"In challenging wetting conditions, Roundup Ready canola sown into stubble came up on almost no rain and the TT canola sown into pasture came up incredibly evenly when more meaningful rain arrived in early May."

At Harrismith, similar February-March rainfall was followed by 10.5mm in April and 29.5mm in May.

Crops were sown and germinated on soils that had retained some moisture and were topped-up by another 9.5mm on April 19.

Mr Fowler said he wondered whether the crops would show any trifluralin damage, due to the action of the SE14, but none was identified.

He said the evenness of crops also made spraying decisions easier.

"We have had several difficult years with staggered canola germinations and that can do your head in with spray decisions," he said.

Depending upon soil moisture levels at seeding, Mr Fowler said he planned to apply SE14 at 3L/ha with all crops at Williams, on all oats and canola at Harrismith, to increase the use on barley at Harrismith and he would continue to investigate different rates in different soil types, in an effort "to find the sweet spot" with the moisture agent.

