

SACOA UPDATE *growing technology*

SACOA SE14 shines in non-wetting soils

By **KEN WILSON**

ONE of the highlights of the WA No Till Farmers Association's (WANTFA) Soil Amelioration Day at Bolgart on Thursday, August 27, is a bus tour of various trials involved in soil amelioration.

It will also include trial work on Bolgart farmer Trevor Syme's property of SACOA's SE14 banded surfactant which is gaining in popularity for use when dry sowing and for use on non-wetting soils.

With increasing larger cropping programs, dry sowing has become a management practice throughout the Wheatbelt to maximise crop establishment in the sowing window.

But the bogeyman is non-wetting soils.

Farmers are addressing the problem by ameliorating soils through strategies including mouldboard ploughing, spading, offset discs and deep ripping.

But according to SACOA regional WA manager Damon Fleay, such treatments can be inhibited by soil structure.

"Typically forest gravel soils, for example, are too hard or littered with tree stumps preventing any decent measure to eliminate non-wetting," Mr Fleay said.

"The other aspect of dry sowing is that changing weather patterns are seeing less autumn breaks and

more showery rain events.

"This leads to risks of crops not germinating evenly which has been the key focus of SACOA in recent years and the fruits of that research led to the commercial release of SE14 in 2015."

Mr Syme, who is hosting WANTFA's Soil Amelioration Day, used SE14 for the first time this year on a lease block south of his main property.

"It mostly comprised non-wetting forest gravels and I wanted to capitalise on marginal moisture," Mr Syme said.

"The benefit I saw was that you can place SE14 with a carrier next to the seed and it worked well in a scenario where I was not expecting the crop to germinate that well.

"We had conserved a bit of summer moisture with standing stubble so I started sowing in mid-April.

"Where we applied the SE14, we got a uniform germination within four days compared to the control which was slow away and very staggered.

"We got a five to six millimetre rain event on May 7 but even then the control didn't show complete germination in the rows."

Mr Syme applied SE14 at two litres a hectare with 50 litres of water on 375 millimetre rows streaming the liquid behind each seeding boot.

"The other aspect of the trial was



□ SACOA WA regional manager Damon Fleay (left) and Bolgart farmer Trevor Syme discuss the performance of SACOA SE14 surfactant in this healthy stand of Hyola 410XX canola.

the obvious proliferation of weeds in the control with none present in the SE14 treated rows," he said.

"We used 1.8 kilograms a hectare seeding rate and it worked out we

got 15 per cent germination in the control versus 100pc in the SE14-treated rows.

"We'll definitely use it again because it's another tool in the tool-

box when you need it."

According to Mr Fleay, SE14 also improves the efficacy of herbicides, activating pre-emergents.

"It's a patented formulation of sur-

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❑ Classic dry sown canola establishment in mid-April this year on non-wetting soils showing staggered germination (left) and SACOA SE14-treated (right). Measurements revealed a 1.5 per cent strike in the control compared with 100pc germination in the SE14-treated rows.

factants and retention agents which hold moisture and nutrients in the seeding furrow when banded within close proximity to the seed," he said.

"It actually increases soil moisture holding capacity around the germinating seed."

"And it's designed to be applied using existing liquid injection equipment and is compatible with a range of other in-furrow liquids such as liquid UAN, in-furrow fungicides, trace elements and insecticides."

"It also has a low per hectare use rate which can be tailored for soil type, making it a cost effective crop establishment tool."

The subject of fertiliser toxicity

using SE14 has led SACOA to also establish trials on Mr Syme's property to evaluate toxicity.

"Some guys are having great success using it with Flexi-N while others are a bit more cautious," he said.

"That's why we've started trials to evaluate the subject to identify specific interactions and looking at the whole package."

With the liquid stream placement being critical to the success of SE14, much emphasis is placed on this when growers are setting up to use it for the first time.

"This is where the fertiliser toxicity piece comes into it," Mr Fleay said.



❑ A close-up of the control trial clearly shows weed burdens flourishing from lack of crop competition.

"Placement, rates and types of compound fertiliser being used along with rates of UAN (if any) can help determine how new SE14 growers set up liquid systems on their bars."

"There are some growers running a second tank and liquid kit, some using the one kit with two delivery

lines or placing taps and short secondary line which gives the option to direct liquids to behind the seed boot or away from seed where UAN has traditionally been placed."

"Some growers who are concerned about fertiliser toxicity have changed the placement of compound fertiliser if they are going to use SE14 with

UAN or even changed their nitrogen source."

The SACOA trials will form part of WANTFA's 'bus tour' during the day assessing 17 demonstrations along with a soil pit talk by Department of Primary Industries and Regional Development (DPIRD) researcher Stephen Davies.




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