

# Singulation peaks broadacre interest

By **KEN WILSON**

**BROADACRE** crop establishment, particularly corn and sorghum, using singulation, has been a well established practice throughout the world for decades.

But it has taken high-cost hybrid canola seed to raise interest in the method in WA.

And there are signs it won't be too long before canola and lupins, along with summer crops, will be sown using singulation, characterised by precision seeders fitted with individual seeding boxes above sowing discs or tines, with the air seeder used only for fertiliser blends.

German manufacturer Horsch also is trialling its own singulation system for sowing cereals.

In any event, it's a subject likely to gain increasing interest from researchers, who already are signaling a program of trials throughout the Wheatbelt this year to establish canola on wide rows.

Trials, associated with the Northern Agri Group, are showing promising results sowing hybrid canola varieties at lower rates on wide row spacings between 50cm and 60cm (20-24in).

What got Wellstead farmer Peter Diprose's attention was a quick calculation of how much he could save on sowing costly hybrid canola (about \$37 a kilogram) by lowering sowing rates on 50cm spacings.

He took the plunge and last year bought a South African-made Equalizer vacuum precision planter from Albany-based distributor Direct Seeding.

"With the singulation, we'll be

growing more hybrid canola varieties in the future as opposed to the triazine-tolerant (TT) lines which are grown on selected paddocks," he said.

"Hybrid canola varieties are a huge expense and in my first year with the Equalizer I saved \$20,000 in seed costs.

"Plus I reduced fertiliser costs, in-crop chemical sprays and finished with good yields (average 1.75t/ha), so the gross margin side of the equation is pretty compelling."

As a comparison Peter sowed some TT lines with seed he had kept, with his K-Hart seeding rig and achieved 1.5t/ha sowing at 4.5kg/ha.

"The big difference was the gross margin story which was better using the Equalizer," Peter said.

Last year, Peter started sowing his canola with the Equalizer at 1.9kg/ha following 18mm of rain at the end of April.

"We were virtually sowing dry but we got germinations within four days and we could see the crop was way too thick so we went back to 1.7kg/ha to finish the program.

"This year we'll start at 1.5kg/ha and do a few trials down to 1.2kg/ha and I'm told we could go lower.

"But it's not so much about the seeding rate per se, as plants per square metre, which is how the Equalizer is calibrated.

"It takes a bit to get your mind around it but it's a matter of calculating seed size per kilogram and relating that back to plant counts."

As far as row spacings were concerned, Peter said 50cm was enough to incorporate chemicals.

"Any wider and you're probably



Direct Seeding director Darryl Hine with Wellstead farmer Peter Diprose's Equalizer precision seeder which is being altered to provide a full 12.2 metre (40ft) working width.

going to have trouble with soil throw (not covering the row)," he said.

While Peter bought the Equalizer as a purpose machine for sowing canola, it will be employed for other uses such as sowing pastures – Peter runs about 14,000 head of sheep.

"We'll trial sowing serradella in April with a view to harvesting the seed and then maybe under-sow serradella with oats to establish pasture," he said.

"That will enable us to do two jobs in one hit.

"The other aspect of sowing with

the Equalizer on wide spacings is that we can get through heavy barley stubbles so we don't have to burn.

"We tend to cross header trails at 90 degrees to establish canola and the Equalizer gives us a smooth finish which is reflected by even germination."

Interestingly, swaths are picked up at either 45 or 90 degrees to the swath.

The other aspect of singulation that impressed Peter was the accurate seed depth (10mm) and distribution (35-40cm, 14-16in), often described as like a picket fence.

Fertiliser was banded at between 35 and 40mm (sub 2in) with rates coming back after an initial rate of 110kg/ha.

"We went back to 90kg/ha so we saved on fertiliser costs and yields were not that much different between higher and lower applications," Peter said.

"We got great germination and the crop cabbaged out quickly to out-compete the weeds."

Peter has no qualms sowing dry with two early applications of glyphosate sprays post-sowing.

## WEEKLY FARMING

Farm Weekly Thursday, March 12, 2015 15



Even germination using the Equalizer enables canola to cabbage quickly to out-compete weeds in the 50cm (20in) row spacings.

"Our rotations see Roundup Ready canola going in every six years in a wheat, barley and oats rotation with TT canola or Clearfield varieties.

"So we're pushing out the chemical groups as wide as possible."

According to Direct Seeds director and Wellstead farmer Darryl Hine, the Equalizer would be an ideal machine in lower rainfall areas where farmers generally aim for canola yields around 1t/ha.

"With precision sowing, lower costs and wider spacings for potential edge-effect during the growing season, hybrid canola varieties will have a lot of appeal," he said.

According to South African manufacturer Theebo Tech seed depth is controlled by the gauge wheels.

A centrally-mounted gearbox is fitted to regulate down-the-row seed populations, replacing sprockets and chain, while seed metering is a vacuum system which enables seeds to be

placed individually in a rotating seed plate for metering down the seed tube.

Each planter hopper holds 70 litres of material or in the case of canola, 5kg.

The fertiliser hopper holds 6500L of dry fertiliser.

Fertiliser, from the central hopper, is delivered to the tine units via a self-cleaning metering system.

According to Mr Hine, productivity of the Equalizer surprises many farmers.

"A unit with a working width of 18 metres (60ft) will have 36 planter units which is enough for 1800 hectares," he said.

"Working speed is between eight and 10km/h so you can get through a program pretty quickly in the right conditions.

"And you can run a liquid tank behind the Equaliser with plumbing to each unit."

Mr Hine said the Equaliser was available in working widths ranging from 6m (20ft) to 18m.

## Equalizer a sweet fit for Torbay



Albany farmer Phil Harding with his two-row Equalizer precision planter. In the background is an old veggie planter he previously used which provided him with hit-and-miss seeding.

WHILE the focus of the South African-made Equalizer is on broadacre canola establishment, Direct Seeding director Darryl Hine sees a broader market appeal for the machine.

And so does Torbay farmer Phil Harding, who has bought a two-row Equalizer planter for his corn operation.

The 3PL unit is exactly what he requires to singulate corn seed which he grows, mainly for the Perth metropolitan market.

Mr Harding bought the machine last year to replace an ageing seed planter with a belt metering system that "caught" seed in notches in the belt before dropping down seed tubes.

"It was a bit hit and miss because you could get double seeds or complete misses," Mr Harding said.

"It was 30 or 40-year-old technology so I'm very happy to be using a singulation system that really works well.

"Germination has improved because of precision sowing and yields have at least doubled while using less fertiliser."

Mr Harding sows on 75cm (30in) spacings with seed spacings of 24cm (about 10in).

He staggers his planting with six day intervals between each plant, enabling him to have a staggered finish to harvest the corn, grade and pack and transport to Perth.

"We couldn't handle the logistics if it all ripened at the same time," he said.

Mr Harding also trialled planting melons using duct tape to blank holes in the metering disc to achieve seed spacings.

His preparation for sowing in what he describes as "clay swamp" soil is to mouldboard then rotary hoe to break up the clay clods and create a level seed bed with the necessary tilth.