EQUALIZER

Singulation peaks broadacre interest

Direct Seeds director, Darryl Hine, with the Equalizer.

Broadacre crop establishment, particularly maize and sorghum, using singulation, has been a well-established practice throughout the world for decades. However, it has taken high-cost hybrid canola seed to raise interest in the method in Western Australia.

There are also signs that it will not 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.

In any event, it is a subject likely to gain increasing interest from researchers, who are already signalling a programme of trials throughout the Wheatbelt this year to establish canola on wide rows. Trials, associated with the Northern Agri Group, are showing promising results for sowing hybrid canola varieties at lower rates on wide-row spacings between 50cm and 60cm.

What caught Wellstead farmer, Peter Diprose's, attention was a quick calculation of how much he could save on sowing costly hybrid canola (about Aus$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 shall be growing more hybrid canola varieties in the future as opposed to the triazine-tolerant (TT) lines which are grown on selected paddocks," he says.

Trials with canola

"Hybrid canola varieties are a huge expense and in my first year with the Equalizer, I saved Aus$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 says. Last year, he 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 programme.

"This year we shall start at 1,5kg/ha and do a few trials down to 1,2kg/ha, but I am 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 is a matter of calculating seed size per kilogram and relating that back to plant counts."

As far as tow spacings are concerned, Peter says 50cm is enough to incorporate chemicals. "Any wider and you are probably going to have trouble with soil throw (not covering the row)," he says.

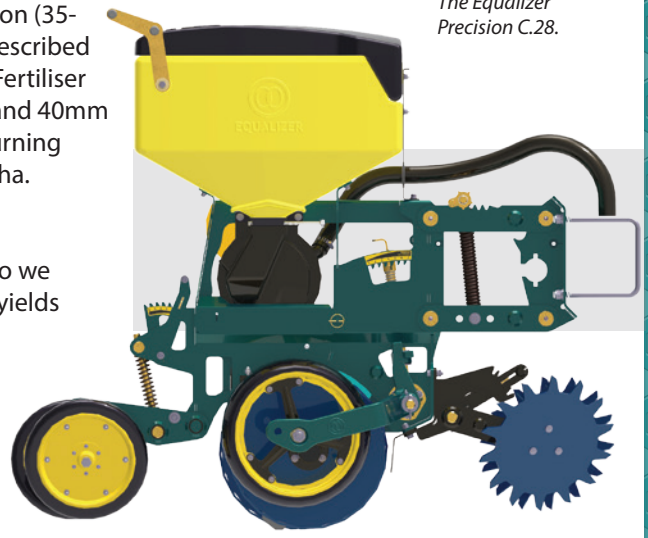
Benefits of singulation

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 shall trial sowing serradella in April with a view to harvesting the seed and then maybe undersow serradella with oats to establish pasture," he says.

"This 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 trials 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, 14-16 inches), often described as being like a picket fence. Fertiliser was banded at between 35 and 40mm (sub 2 inches) with rates returning after an initial rate of 110kg/ha.



The Equalizer Precision C.28.

Ideal machine

"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 says. "We got great germination and the crop cabbaged out quickly to outcompete the weeds."

Peter has no qualms sowing dry with two early applications of glyphosate sprays post-sowing. "Our rotations see Roundup-Ready canola going every six years in a wheat, barley and oats rotation with TT canola or Clearfield varieties. So we are pushing out the chemical groups as wide as possible."

According to Direct Seeds director, Darryl Hine, the Equalizer would be an ideal machine in lower rainfall areas, where farmers generally aim for canola yields of about 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 says.

It will not be too long before canola and lupins, along with summer crops, will be sown using singulation.

An Equalizer exhibited at Nampo 2014.

Seed depth

According to the 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 70ℓ of seed. The fertiliser hopper holds 6 500ℓ of dry fertiliser. Fertiliser, from the central hopper, is delivered to the tine units via a self-cleaning metering system.

According to Darryl, the productivity of the Equalizer surprises many farmers. "A unit with a working width of 18m (60ft) will have 36 planter units, which is enough for 1 800ha," he says. "The working speed is between 8 and 10km/h, so you can get through a programme pretty quickly in the right conditions. And you can run a liquid tank behind the Equalizer with plumbing to each unit." Darryl says the Equalizer is available in working widths ranging from 6m (20ft) to 18m.

Visit *www.equalizer.co.za* for more information.