



Cracker job



Apprehensive about the effectiveness of these machines, Jaiden Drought took himself off to Hawkes Bay to see the Alpego in action. In his own words, he was “blown away” by its effectiveness.

With much talk of the need to stop full tillage and start exploring the no-till alternatives, for me this is somewhat middle ground: you still need to power harrow but you can get away without using the plough.

To be honest, I never really thought we were compacting our soils to the point where the soil characteristics change and the water holding capacity is severely diminished. So it is fair to say I headed to the Hawkes Bay with some anticipation regarding how the Alpego was going to perform, but having seen the machine in action I am sold on the idea that this is a very credible alternative.

This month's test machine is the Alpego Super Cracker FKFR 9 IDRO – the last bit just means that the machine is the nine-leg version with twin hydraulic depth rollers on the rear of the machine.

The two-month-old Alpego is owned by the Gray family, who farms 864ha in 50:50 cropping and sheep and beef on the Ruataniwha plains, at Ruataniwha, Hawke's Bay. The machine is imported and distributed by Origin Agroup but was bought through the Gray's local Case IH dealer, Stevenson and Taylor Ltd, which is one of the original shareholders of the Origin Agroup co-operative.

Company history

Alpego is an Italian company located between Venice and Verona in a strong rural area, where Vittorio Pegoraro (the company founder) began manufacturing his first agricultural implements more than 60 years ago.



- Easier to pull due to shank design
- Rear rollers smash sod and trash while helping push the tractor
- Shear-bolt shank protection
- Hydraulically adjusted depth
- Modular design for strength



- Couldn't aerate your whole farm at once as it brings up too much sod – the only downfall of this shank design



In 1990, the company name was changed to Alpego and is today run by the second and third generations of the Pegoraro family. Alpego manufactures solely tillage equipment with a key focus on quality and reliability thanks to a high tech research and development department.

Benefits of sub-soiling

The beauty of sub-soiling is that you really don't know what the soil is like underneath and how the different activities that have gone on in that paddock can affect the soil's potential to grow new crops. For example, the paddock on the Gray's property where we were sub-soiling was un-ploughed, un-sprayed ground, so the tractor was working hard admittedly, but it was still comfortably getting up around that 5-6km mark. There were some tracks where trucks had been bringing in metal for one of the centre pivots on the property in the same paddock. I never thought this would impact the soil as much as it did but as soon as we got to that patch with the tractor, it was like we hit a brick wall: all eight wheels stopped and we weren't going anywhere.

Another example of this is in maize

paddocks where, during the previous harvest, trucks are carting through paddocks to get to the road. Once you have sub-soiled the whole paddock with one of these Alpego machines you can see the tracks that trucks have made, but only once the soil has been sub-soiled – you can't tell when it has been sprayed out. This goes to show the invisible damage we are doing to soil and the unknown loss of yields as a result. The upshot of sub-soiling and breaking up that subsoil is it makes the soil spongier, meaning excellent subsoil drainage plus better water holding capacity for dry periods, so deep tap-rooting plants, such as maize and lucerne, can reach their full potential.

The Super Cracker is no ordinary piece of machinery and it works in contrary to the transport authority's message over the years, because in this case, the slower you go the bigger the mess. Not really a mess as such, more the large amount of sod that is pulled up, although this is easier said than done when you have a 4m machine with nine legs half a metre in the ground – it takes a big donkey to even get it moving. Luckily the Gray's had a 670-hour-old Case Magnum 245.

Key design features

Adjustable width modular frame:

the frame is specifically designed in this way to retain strength but it also helps to reduce overall weight. The other benefit of the modular design is that each of the nine shanks (four in the front and five in the back) can be moved in or out over this particular machine's 4m width.

Shanks with shear-bolt security

system: the shanks are designed where they are held in the working position with two bolts. One goes through the shank (across the machine) and allows it to swing forwards and backwards, and the other one is the shear-bolt (front to back) that holds the shank on to the frame. If an obstacle is hit underground, the shear-bolt is broken into two and the shank

swings back out of harms way. This simple design increases longevity and reduces downtime, things that are music to any contractor's ears.

Shanks with a progressive penetration angle: this design breaks up the soil at your set depth in a uniform fashion, crumbling the compacted layers without disturbing the organic balance of the soil but the also allows this to happen in a way that makes the machine easier to pull through the ground in return lowering operating costs.

Due to the shanks being curved, they lift the soil towards the surface as they break through the compacted layers while moving forward. If they were straight legs you would get the same aeration effect; they wouldn't shatter the subsoil up to the same extend

“These machines are built tough for even the harshest conditions”

(which creates the better drainage characteristics) and are much harder to pull.

Double rear hydraulic roller: the rear hydraulic spiked rollers are what give this machine the ability to become a substitute for the plough. As these roll over the sub-soiled ground, they aggressively smash up the sod or trash material that is bought up by the shanks. Although it doesn't look like it makes a good job in the green grass area we tested it in, once you get into worked or sprayed ground it really gets stuck into it, and as I mentioned earlier, the faster you can go the better job it does.

Having the rollers on the rear of the machine to do the initial crumbling and levelling of the top layer reduces the need for additional passes, so you literally can spray out, sub-soil, powerharrow and plant. The other benefit of the roller's spiked design is that, in a round-about sort of way, they help push the tractor along once you get some speed up, due to the long spikes aiding momentum to push you though a short hard patch. The hydraulic option on this particular machine gives you the added benefit of adjusting the sub-soiling depth on the move.

Verdict

These machines are built tough for even the harshest conditions, and I have to say I was in the “non-believer” camp about their effectiveness. After seeing one in action and the fact it completely stopped when we hit those truck tracks, I was blown away at how far down that compaction goes. Admittedly this is the biggest machine the company makes, but stopping a 250+ hp tractor with eight wheels dead goes to show just how much this machine is doing underground, which can only be a good thing.

Everyone you talk to who owns one or has had one in use on their farm thinks these machines are the best thing since sliced bread. And if that's not good enough for you, they are painted in Taranaki colours, which is reason alone to go out and buy one because we have the shield, remember? ■



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