

Forging new concepts in cultivation

The GC Foundry has been supplying components to the mining, earthmoving and agricultural industry for many years. Last year owner-operator Geoff Swilks asked Ken Wells of Wee Waa to introduce him to some switched-on cottongrowers. Geoff was keen to go beyond supplying just some of the components — he wanted to design and manufacture an entire unit.

Ken took Geoff to see Paul. Paul Swansbra that is, of 'Lammermoor', Merah North in the Lower Namoi. Paul had a simple request when it came to his machinery requirements.

"Paul was very clear on what he needed and hadn't been able to find," recalls Geoff. "He wanted a 12 row cultivator that could be mounted on standard linkage, that wouldn't tear the rear end out of his tractor and didn't need a heap of weights to keep the front end on the ground when he lifted the implement.

"And oh yes, he wanted it to be user friendly to the extent that it could be simply adjusted in the field by just one operator."

Six months and six thousand acres later Paul has had his 'wish list' fulfilled.

Casting about for a cultivator

"I appreciated Paul's clear understanding of what he needed and went home to think about it." explains Geoff. "I put together a very rudimentary prototype that I thought was on the right track. Paul had a look at it and very quickly pointed out any number of shortcomings.

"But what was encouraging was his comment that at least I was listening to what he had to say."

Paul Swansbra happily put what is now called the GCA-1012 parallelogram inter-row cultivator through its paces last season. This unit features:



The new generation GC cultivator at work on 'Lammermoor', Merah North. This unit will be on display at the Cotton Trade Show at Moree on May 29–30.



Simple rack and pinion shank depth adjustment on furrower

- A rugged, compact-design 12 row rig with the centre of gravity moved significantly forward to deliver very stable operation;
- Shanks that come with built-in depth and angle gauges for ease of adjustment; and,
- Adjustments that can be carried out by one operator, using one spanner.

Moving the implement's weight forward has eliminated a lot of hard turning-brake effort and the need for rear assist. Being shorter than the norm, the cultivator also has less tendency to wander.

Clamps, shanks and friction trips are cast in a highly wear-resistant nickel chrome molly steel in the GC foundry.

"We use the steel in ripper points that we provide for the Cat D12 and for the bucket teeth on draglines in the open cut mines. It's tough — your shear pins are going to go a long time before your shanks," explains Geoff.

"Cast steel parts today are a far cry from the brittle cast iron of many years ago. Our quality control, which includes metallurgical testing, ensures the structural integrity of our components.

"Being cast, we can provide the components with a counter sunk recess to hold bolt heads. This delivers sole operator, 'single spanner' adjustment. Also incorporated on the cast are numbered graduations to allow for exact adjustments without the need for tape measures."

A furrower out of the mould

With the new cultivator concepts delivering clear benefits in the field, attention was turned to the new season centre and side buster/furrower operations. Again the drive was for a lighter, operator- and tractor-friendly design robust enough to meet the demands of the job.

The four and six row GCA 1014 centre buster/furrower meets these requirements by incorporating:

- A single bar configuration which saves on weight and cost;
- Extension carriers mounted on the single bar deliver the depth through the implement; and,

- Shanks with 'single spanner', rack and pinion depth adjustment.

The GCA 1016 side buster/furrower range is on a double bar configuration that allows the option of also mounting a centre buster.

A side buster unit (without the furrower) is currently being used as a deep ripper on cotton country that has just been re-leveled.

"This unit is working at a depth of around 4–500 mm in some tough going," explains Geoff. "It's bringing up roots that have never been struck before. The cast shanks with their full length shin guards are doing fine, but the shear pins are suffering from time to time."

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