

Cotton looks sweet in the Burdekin

By David Dowling

Over the past 20 years or so, cotton has gone from a 'young upstart' to a 'mature industry' in Australia. The real excitement used to come as cotton moved in to new production areas, bringing its focus on high technology and rapid development and its attraction to a young, ambitious generation of farmers and advisors.

The most recent example of this sort of development has been in southern NSW.

And there may be another new area on the horizon — the Burdekin Irrigation Area in north Queensland. There have been cotton trials going on there for about four years now and *The Australian Cottongrower* took a study tour to the area as long ago as 1999 — but it might just be ready to take off.

Because there was certainly that air of excitement at the Burdekin Cotton Bus Tour held on May 8. The tour was funded by the Cotton Catchment Communities CRC and a mix of local growers and cotton industry people from 'down south' toured many of the farms which are growing over 800 hectares in what is really a large commercial trial. The general feeling was that there was real potential in the area, although it may take a few years to be fully realised.



Wayne Dal Santo in front of a very impressive looking crop grown on country where the cane was harvested early and quickly followed by mungbeans before cotton planting in January.



Paul Grundy (left) explains some of the cotton trial work being done at the Ayr research station. The trials are looking at the impacts of low radiation (cloudiness), rainfall and high humidity on different growth stages and varietal types in a bid to determine yield potential for wetter than average years.

Of course the big attraction is the water — and lots of it. A very big dam with over 95 per cent reliability and which can fill in a couple of days over summer with a decent torrential downpour. The Burdekin has the largest annual outflow of any river in Australia.

The dam services over 100,000 hectares of developed country — most of which is a sugarcane monoculture, although there is some horticulture development in the lower 'delta' area which uses mostly groundwater.

Many of the cane farmers are having a hard time of it with sluggish prices and often disappointing yields and there is a general desire for one or more decent alternative crops to justify the \$15000 per hectare price tag on the better country. Of course, that price is for developed country which carries a reliable water allocation of eight megalitres per hectare with a delivery cost of about \$40 per megalitre.

In this environment there is no shortage of crops to grow, and they can be grown twice a year. But cotton seems to offer the

best option for another large scale, high value crop in the rotation.

Sugarcane will be the bread and butter of the Burdekin for a long while yet, but it is very hard on soils. Apart from providing an alternative cash crop, cotton offers a lot of agronomic advantages such as a deep tap root to break up the soil and good weed control options, especially with Roundup Ready varieties. In fact, the future of any cotton industry in the area will depend on using both Bollgard and Roundup Ready technology.

Paul Grundy from Queensland DPI&F is now based in Ayr and has supervised the cotton program in the Burdekin this season. Steve Yeates (CSIRO) has also played a major role in the work and ran the initial modelling to determine the best planting dates and other components of the production system. Farmers are getting their agronomic advice from Alex Murray and Graham Boulton from Black Earth Farming Company.

The researchers and advisors have done a great job but have a lot of work in front of them to develop a production system which needs to be totally different to anywhere else in Australia.

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Lindsay Hall remains strongly supportive of cotton in the Burdekin despite some mixed results in a very wet year. "There is plenty of interest from my neighbours and we have had lots of visitors." Lindsay even has a perfect gin site picked out on his farm.

It's not like a traditional southern system and the winter temperatures are too low for an Ord River winter season. The optimum season is for planting in late December to mid January with picking in June or July. Pix management is critical and 2,4-D damage is a major concern, especially among farmers who have not had to worry too much about drift problems before.

And planting cotton (or anything else) after cane has its own unique problems. Five years of ratooned sugarcane takes just about everything good out of the soil and leaves behind a problematic mix of nematodes, weeds and diseases. All crops we saw on the recent field day were highly variable and often had low yield potential when they were sown directly after cane.

The best crops were the second crop after cane — especially if the first crop was a legume. One of the best cotton crops was on a field where the cane was cut early (June 2007) and was immediately followed by a mung bean crop and then cotton was planted in January this year. This could be a very productive rotation, but involves harvesting those cane fields early. The traditional approach has been to harvest fields going out of sugar last — around late November or December.

THE BUS TOUR

This year's cotton crops were grown by 12 farmers over a wide range of soil types. Most of them are traditional sugarcane growers but there are a couple of southern cotton/grain growers who have bought country and are here for the long term.

The Burdekin is always likely to present some interesting weather problems. And this year was a one in 20 year wet season.



Mark Goos, manager of Mulgowrie Farms, is growing cotton under centre pivots and is happy with the result this year, although he has learnt some valuable lessons. "Fertiliser placement is the key. We need to avoid planting straight into cane ground, use less N at the start and keep feeding it as necessary."

The problem wasn't so much the amount of rain but the timing and the way it fell.

The Burdekin wet is usually in February–March and arrives as a series of short, sharp deluges. This year it started in January and the wet soggy conditions stayed around till March.

Those cotton crops which were planted in early January (or in brief planting windows in late January) sat in saturated conditions for a couple of months. There was no strong root development and the roots often didn't reach the fertiliser band. The situation wasn't helped by poor drainage on some fields which had 1200 metre runs and slopes of one in 3000.

When the ground started to dry out, the roots couldn't follow the moisture. The crops quickly suffered stress from lack of

nutrition and/or water. This was especially the case in cotton crops straight after cane, with very poor background soil nutrition.

It's always dangerous to predict yields a month or two before picking, but the Burdekin crops this year will probably range from zero to 3.5 bales per acre (8.75 bales per hectare). The zero crop was ploughed out because of the nutrition/water problems.

The high yielding crops were those grown on well prepared country, some after a legume rotation, and where management was able to react early to the developing waterlogging problems in February.

One of the crops with the most potential was grown by Andrew Keely, a 'southern' farmer with about 320 hectares which looked very good in early May, despite having a flood over part of the crop earlier in the year. But there were also some good looking crops grown by local cane farmers. Of course, the pickers will tell the tale over the next few weeks.

Once the crop is picked, the fun really starts. It's a long haul to the nearest gin at Emerald, and while Queensland Cotton offers a subsidy on the transport of modules, this falls well short of covering the extra cost and is probably not a long term option.

So the Burdekin is left with a chicken and egg situation. They need to grow enough cotton to justify a gin, but most of the prospective growers won't get serious about cotton until a gin is built.

If things were looking a bit rosier in the rest of the Australian ginning industry, the race would probably be on right now to lay the first slab in the Burdekin. As it is, the local growers may have to wait a year or two for this to happen.



Vin Sorbello (left) explains the problems he had this year with waterlogging and subsequent difficulties in accessing fertiliser and moisture in a crop with a very poor root system. Nevertheless, he remains upbeat about cotton's potential. "Cotton is do-able in the Burdekin," he said. "Once we work it out, I think we can grow cotton as well as anywhere in the world."



Andrew Keely (right) explains some of the season's dramas to CSD's Peter Graham and local grower John Lewis (left). Andrew is the biggest cotton grower in the Burdekin this year and has moved to the area because he is so impressed with the potential. "Water was the big thing," he says, "and I like a challenge."