

# WATERLOO PARTNERS

## *AgriRisk High Achiever of the Year*



The Gill's run a successful family farming operation 50km south west of Narromine in NSW. In a true partnership, Andrew and Clare, Andrew's two brothers, Simon and Jeremy, their parents, Norton and Loosie, along with their partners and families manage the enterprise. While they all work across the business, Andrew oversees the irrigation aspect of the operation.

The black soils of "Waterloo" host the farming operations, whilst the lighter country is home to forage crops and livestock grazing. Much of the farming country is naturally sodic. To help manage this challenge the Gills incorporate barley into their wheat/cotton rotation. In addition, they run on small irrigation deficits mid-season and a large deficit for their last irrigation to leach sodium through the profile.

Whilst they have only managed three rain-grown crops out of the past five years, Andrew is still a strong advocate of this sector of the cotton industry. He was involved in establishing a new group "The Dryland Cotton Research Association" as a voice for the dryland cotton industry.

The Gill family have developed an effective semi-irrigated, double skip system that helps maximise production from their finite bore water allocation and daily extraction rate issues. In the 2015/2016 season they used 4ML/ha to generate 9 bales/ha as opposed to their solid plant cotton using 9ML/ha to yield 13bales/ha. They aim to grow 70% of the cotton using 60% of the inputs on 50% of the green area, compared to conventional 1m cotton.

This innovative configuration consists of 4m furrows. Plant rows are established either side of these furrows, with the rest of the field remaining flat. It creates irrigation efficiencies by having complete control of where the irrigation water goes, countering the heavy grey cracking soils they farm. Water is

### **HOME PROPERTY**

"Waterloo", Narromine NSW

### **PART OWNERS**

Andrew & Clare Gill

### **TOTAL ENTERPRISE SIZE**

8,500Ha

### **AREA TO COTTON 2015/2016**

320Ha

### **YIELD TARGET**

10.6 B/ha

### **WATER ALLOCATIONS**

4,500 ML Bore

### **TYPE/S OF IRRIGATION**

Flood Siphon

### **NO. OF OPERATORS**

3 brothers & partners, 1 FTE and casual

### **ENTERPRISES**

Dryland cotton when appropriate, sheep, cattle, wheat, chick peas, faba beans and forage crops.





directed to the root zone only, not the whole field. The flat areas between the planted rows allow better infiltration during rain events and overall a larger area to capture rain. This configuration offers greater summer irrigation flexibility as the crop has a wider moisture pool to draw from. It also allows better establishment of winter crops in their 1 to 1 rotation.

Andrew recently installed a solar/diesel hybrid system to power his irrigation bore, one of the first of its kind in the world. He invested more than 400 hours of his time in its research and design. Whilst it uses off-the-shelf components, Andrew's research helped him identify the ideal combination of components for his situation at a price that was right, from companies he could trust.

This hybrid system uses 100KW of photovoltaic panels to power a 55KW motor, using a variable

speed drive rather than an inverter, creating further efficiencies. This innovation has generated industry-wide recognition, with a recent field day attracting more than 120 people.

Andrew has calculated the system will pay for itself in under four years and save at least \$50,000 per annum in diesel costs and maintenance. Plus Andrew loves to hear the sound of the water pumping without the thrum of a diesel engine.

Andrew is a leader in his own right; demonstrating innovation, dedication and intelligence in his cotton operation.

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AUSTRALIAN COTTON AWARDS WEBSITE:  
[WWW.AUSTRALIANCOTTONAWARDS.COM](http://WWW.AUSTRALIANCOTTONAWARDS.COM)**

