



Australian Government

**Cotton Research and
Development Corporation**

CGA FINAL REPORT

Part 1 - Summary Details

Please use your TAB key to complete Parts 1 & 2.

CRDC Project Number: CGA1802

CGA Mungindi Cotton Growers

Project Title: In field research comparing dryland cotton to dryland sorghum on various row configurations (3rd Year)

Project Commencement Date: 1/08/2017 **Project Completion Date:** 30/06/2018

Part 2 – Contact Details

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Part 3 – Final Report

Background

1. Growers within the Mungindi Cropping Group felt there was a need to identify profitable summer crop options to grow under dryland conditions in the western growing regions. Whilst winter crop rotations are being used to assist in the reduction of issues such as crown rot and root lesion nematode the addition of a summer crop could add further benefit to the farming system from both a sustainability and profitability point of view. This project is now in its third and final year.

Objectives

2. Provide research data to support growers in identifying pathways to incorporate summer crops as a means of improving farming systems efficiency.

Methods

3. In order to achieve the desired outcome a site was chosen on the eastern side of Mungindi. Due to the seasonal conditions it was the only site available to complete the trial. Also due to the poor sorghum results in the previous 2 years coupled with the planting time the intended sorghum treatment was omitted from the trial.

As the crop wasn't planted until 27th November we didn't have an early and late planted trial as intended.

Trial Detail:

The three configurations of cotton planted were single skip, double skip and super singles. The trial consisted of 4 reps of each configuration.

Property Name: Rochford
Starting Moisture: 100mm
Planting Date: 27th November
Variety: 748 B3F
Fertiliser: Nil
In crop Rainfall: 165.5mm

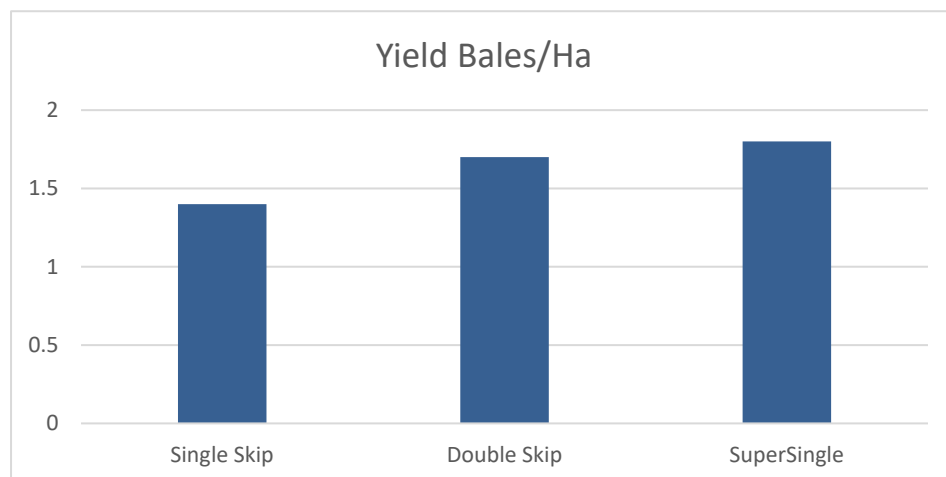
Figure1: Trial Site Location



Outcomes:

The trial was planted on the 27th of November and received 40mm of rainfall on the 1st of December which ensured an excellent establishment. The next significant rainfall event occurred on the 21st of February with 65mm falling which had resulted in the crop being able to put on late fruit which has been the major contributor of yield. Up until this rainfall event the outcome for the trial was not looking positive.

Figure 2: Rochford Cotton Yields



Single skip cotton averaged 1.4 bales/ha, double skip averaged 1.7 bales/ha and super singles averaged 1.8 bales/ha.

As was expected single skip cotton has yielded lower than the other 2 configurations. The double skip and super single configurations were close in yield with only 0.1bale/ha difference.

Samples of each rep have been sent away to determine quality with no results available yet.

Figure 3: Gross Margin Analysis

Variable Costs	Row Configuration		
	Single Skip	Double Skip	Super Singles
Seed	94	62	47
Planting	37	37	37
Pre plant herbicide	17	17	17
Roundup Ready Herbicide	25	25	25
Insecticide	50	50	50
Defoliation	11	11	11
Picking	250	200	200
Monsanto Licence \$52.50/bale	73.5	89.25	94.5
Slashing/Mulching	20	20	20
Ratoon control	17	15	12
Total	594.5	526.25	513.5
Cotton Price(\$/bale)	500	500	500
Cotton Yield (bale/ha)	1.4	1.7	1.8
Net Return	700	850	900
Gross Margin	\$106	\$324	\$387

- Cotton price has been kept at \$500/bale as this is the figure used in previous 2 years data

Based on the values used in the gross margin analysis the single skip configuration returned \$106/ha, double skip configuration returned \$324/ha and the super-singles configuration returned \$387/ha.

A field day was held at the site in April. This provided an opportunity for the 20 growers in attendance to look at dryland cotton this season as it was one of the only fields planted to dryland cotton in the region.

Conclusion

This year's results for the trial were pleasing given the crop was planted into limited soil moisture. With only 100mm plant available water Rochford was not an ideal site but was the only dryland cotton planted in the district hence the decision to proceed with the trial.

In combining the three years of data we are able to demonstrate that dryland cotton is a profitable cropping option for our area.

Sorghum has not proved a successful option in any situation.

Having these results from the area will assist agronomists in their discussion with growers looking to plant summer crop.

Extension Opportunities

As has been done with the results from the previous 2 seasons trials the results will be presented to the Mungindi Cotton Growers Association at their next meeting. There will also be an opportunity to distribute the results to a wider audience in late July as summer crop meetings are held in the region. I anticipate these meetings to be well attended as the area of winter crop planted to date is very low due to the dry weather. Dryland growers will be looking for a summer crop option and the past 3 years trial data will be presented to them along with other crop scenarios.