SUNRICE

INDEPENDENT CROP OPTIONS ANALYSIS

JULY 2014

Michael Ryan – Booth Associates

BOOTH ASSOCIATES

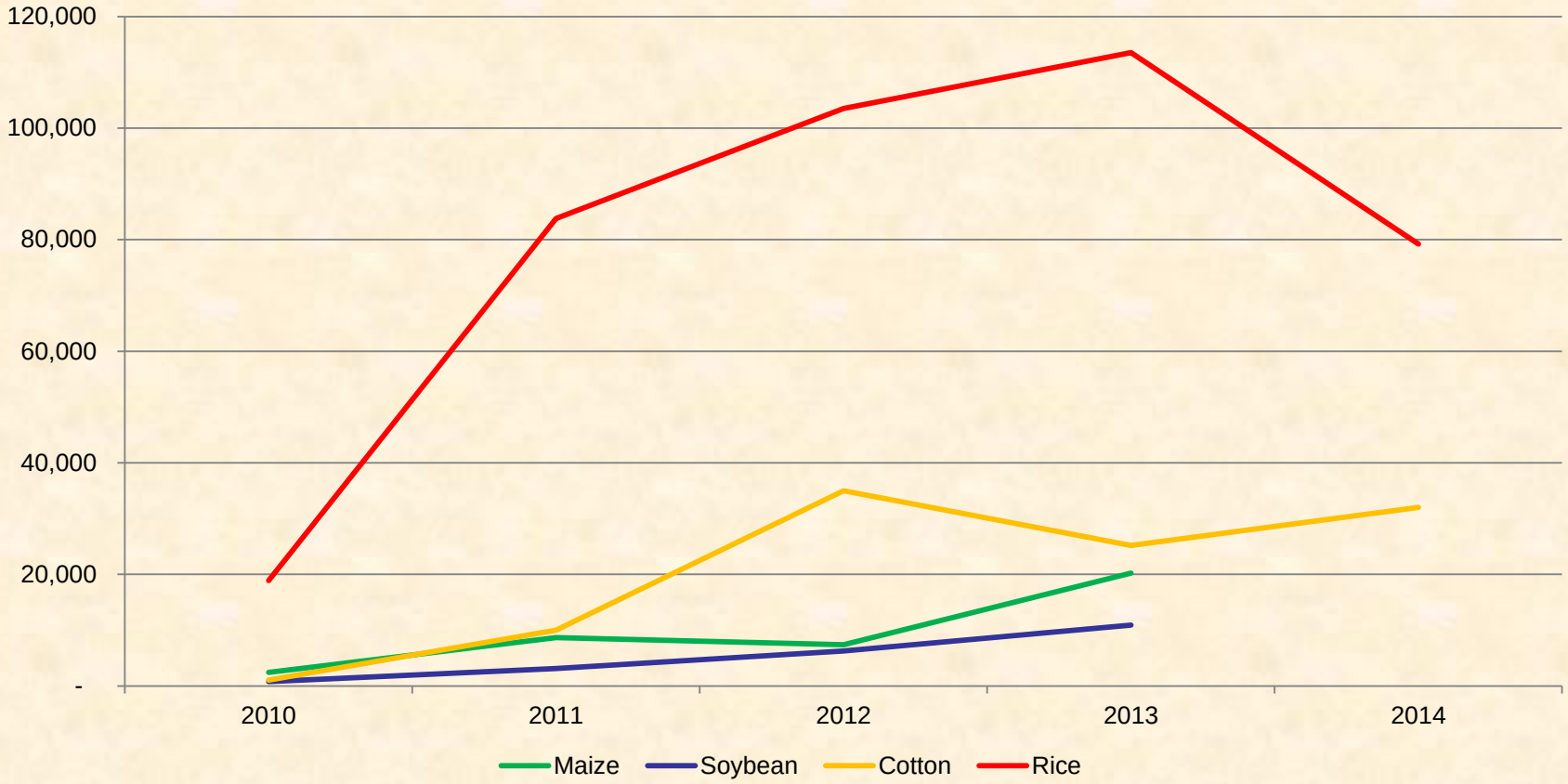
- Agribusiness and Environmental Consultants
- Founded in 1981 and based in Griffith
- Service diverse client base across all irrigated industries
- Advocates for best business practice not an industry
- Background in agronomy

PRESENTATION OVERVIEW

- Cotton industry context
- Gross margins
- Crop cashflow comparison
- Sensitivity Analysis
- Impact of business scale

* Disclaimer – budgets are only as good as the assumptions therein

SOUTHERN NSW CROP AREAS (Ha)



COTTON INDUSTRY IS GROWING

- Improved genetics and technology
- Options to forward sell up to three years out for a fixed price
- Two new cotton gins under construction in Murrumbidgee
- Northern corporate investment in land and water

COTTON PRODUCTION

Messages to cotton growers – IREC February 2014:

- **Cash** is king – so is yield!
- Do not starve your business of **cash**
- Southern NSW cotton industry is growing
- Cotton is hard on **cash**flow
- Understand linkage between **cash**flow and balance sheet
- High cost of cotton production demands **scale**

COTTON RISKS – IREC FEB 2014

- Marketing
- Production
  - Use agronomist and timeliness of operations
- Harvest
  - Contractors/share or own picker
- Access to **cash**
  - Overdraft
  - Crop lean
  - Trade creditors
  - Merchant

GROSS MARGINS

Based on capable growers in Murrumbidgee and long term prices

Crop	Crop Agronomics	Yield T/Ha or B/Ha	Price $/T, $/B or $/ML	Gross Margin $/HA	Gross Margin $/ML
Rice	Medium grain sod sown	12.0	$300	**$2,277**	**$163**
Cotton	Roundup Ready & Bollgard	11.0	475	**2,645**	**240**
Wheat A	After rice	6.0	250	833	416
Wheat B	Rotated with canola	6.0	250	786	196
Wheat C	After cotton	4.0	250	430	215
Canola A	After rice	3.0	475	792	396
Canola B	Rotated with wheat	3.0	475	765	191
Soybeans	Edible on beds	3.5	600	1,500	188
Maize	Grit on beds	11.0	300	1,886	189
Annual sale of allocation	Only dry wheat	-	50	-	50
Wheat – Dry		2.0	250	287	

Rice C2014 actual - 11.75T/Ha at $320/T = $175/ML

GROSS MARGINS

- Useful short term tool
- Can drive poor business decisions if not used correctly

Gross margins in isolation ignore:

- Crops grown in rotation
- Cashflow and funding needs
- Overheads and unallocated costs
- Capital investments and renewal needs
- Strategic planning
- Risk
- Lifestyle and commercial satisfaction

Only useful when comparing within systems

- Where no capex is required

SYSTEM GROSS MARGINS

- Considers the synergies of crops and rotations

Analysis of a representative Booth Associates MIA client base for whole farm comparison

- Business assumptions:
  - 780ha farm with 750ha cropped area
  - 4,500 ML General Security
    - 60% allocation = 2,700 ML annual allocation

SYSTEM GROSS MARGINS

Scenario	System Gross Margin		
	Total $	$/Ha	$/ML
Rice → wheat/canola → fallow → rice	$640,500	$697	$237
Wheat 50% → canola 50%	544,800	726	202
Soybeans → wheat/canola	575,100	767	213
Maize → wheat/canola → fallow → Maize	625,800	834	232
Cotton → wheat → fallow → cotton	734,600	979	272
Sell annual allocation @ $50/ML	350,400	467	130

Note: sell annual allocation gross margin is inflated by returns from dryland wheat grown across whole farm

750Ha MIA FARM SYSTEM

- Crop Program

Crop	Rice System	Cotton System	Maize System
Canola - irrigated	70		80
Wheat - irrigated	100	210	115
Wheat - dryland	410	330	360
Rice	170		
Cotton		210	
Maize			195
Total	**750**	**750**	**750**

PROFIT IMPLICATIONS

MIA – 750ha Farm System

Crop	Rice System	Compared to a Rice System	
		Cotton System	Maize System
Revenue	$1,080K	$1,670K – up 53%	$1,127K – up 4%
Expenses	$825K	$1,448K – up 75%	$997K – up 21%
Profit	$263K	$222K – down $41K	$130K – down $143K

CROP PRODUCTION TIMELINE

Cotton

Month	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Operations	Prepare Seed Bed			Plant	Grow Crop				Defoliate	Pick		Gin			Paid	
Cost $/Ha	270			120	1,355				125	610		985				
Cumulative cost				390				1,745	1,870		2,480			3,465		
													Prepare Seed Bed			**Plant**

Rice

Month	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Operations	Prepare Seed Bed			Plant	Grow Crop				Drain & Harvest		Paid		Prepare Seed Bed			Plant
Cost $/Ha	16			70	720				520		1st	Opt Early				
Cumulative cost				86				806	1,326		Payment	Payment				
													Prepare Seed Bed			**Plant**

FARM EXAMPLE – 170HA CROP

	Cotton	Rice
▪ Water required	2,210ML	2,700ML
▪ Gross margin	$449,569	$384,244
▪ Gross margin/ML	$240	$163
▪ Growing costs	$588,281	$224,910

EXAMPLE CASHFLOW

170ha summer crop rotated with winter crops

Cotton is hard on cashflow

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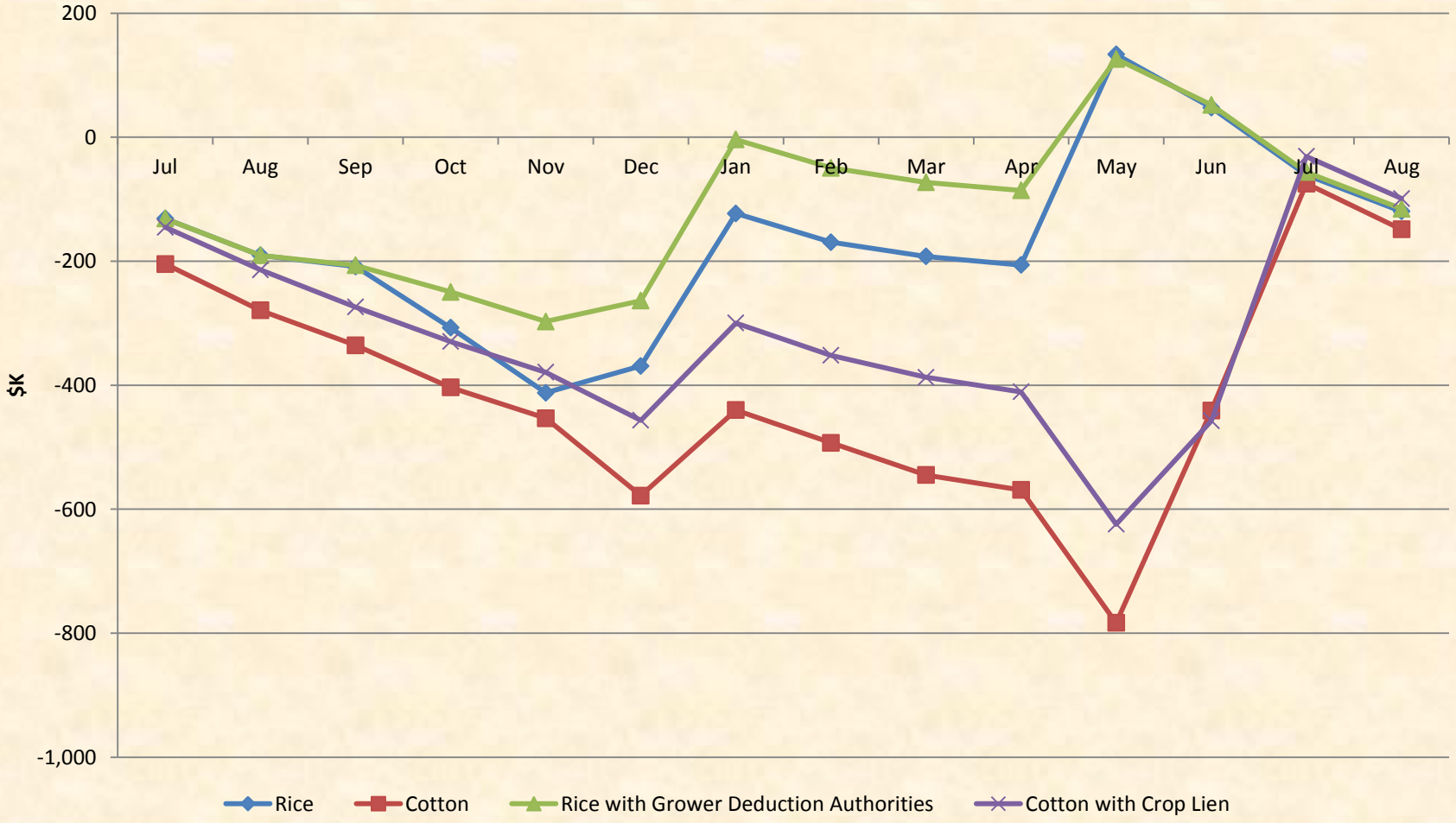
170ha summer crop rotated with winter crops



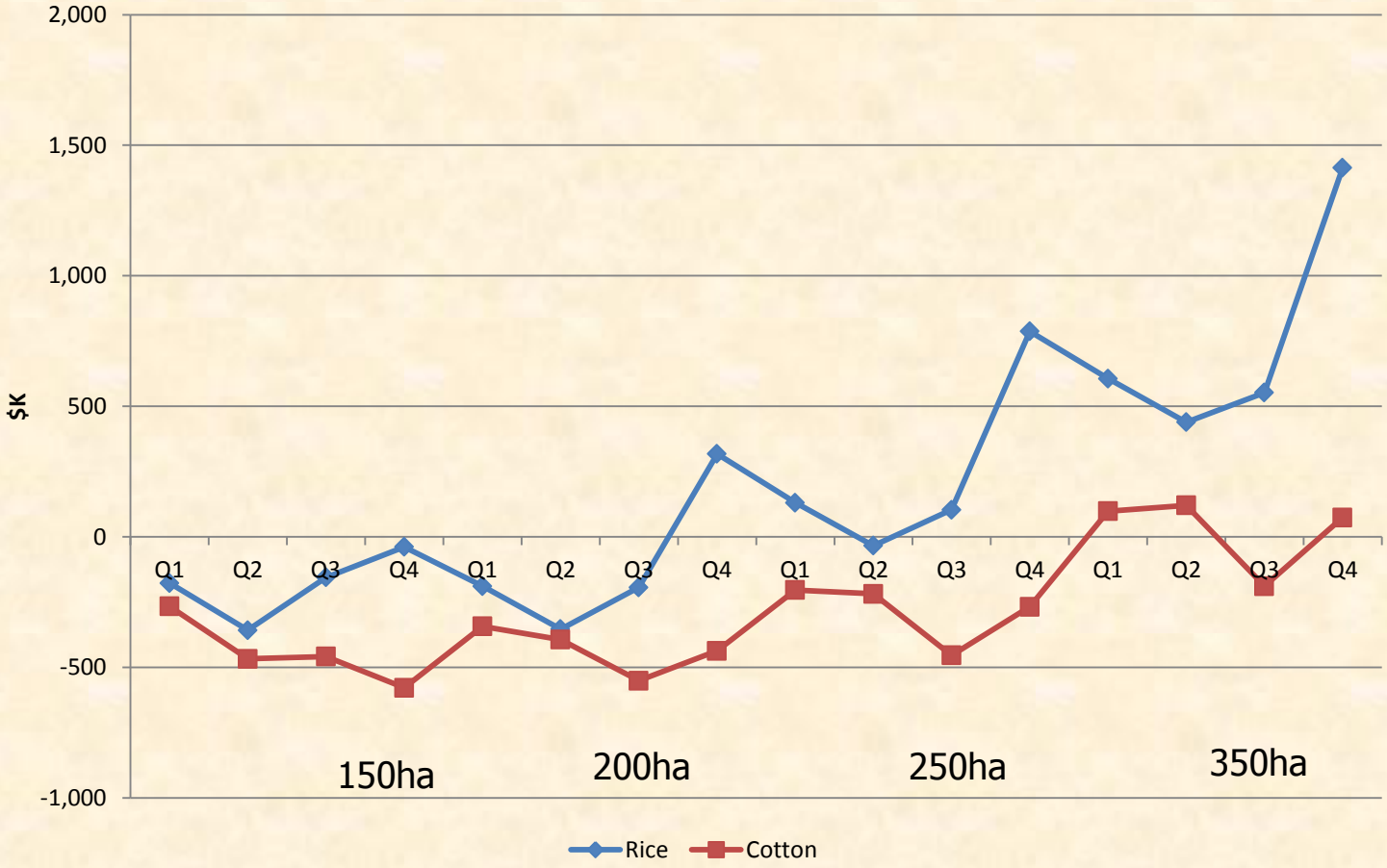
Cotton is hard on cashflow

EXAMPLE CASHFLOW

170ha summer crop rotated with winter crops
Yields down 25% in Year 2 to reflect a "bad year"

Rice system is more resilient

EXAMPLE CASHFLOW
Ramping Up Crop Area



Profit is being absorbed by the increased costs of expanded crop area

CAPITAL INVESTMENT

- Costs to convert from rice layout to row crop
  - $500-$1,000/ha
- Land value appreciates with development but no more than 50% of capital expenditure goes to the balance sheet
- Plant and Equipment requirements increase substantially

BALANCE SHEET

MIA – 750ha Farm System

	Rice	Cotton	Maize
Assets	$6.50M	$7.34M	$7.14M
Liabilities	$0.45M	$0.90M	$0.70M
Net Worth	$6.05M	$6.44M	$6.44M

RETURN ON CAPITAL

MIA – 750ha Farm System

EBIT YIELD

Rice	Cotton	Maize
4.1%	3.0%	1.8%

EBIT = Earnings Before Interest and Tax - debt free profit

SENSITIVITY ANALYSIS

Return on capital

Rice	Cotton	Maize
10T/ha @ $280 = 2.1%	10 Bales/ha @ $450 = 1.0%	10T/ha @ $275 = 0.4%
12T/ha @ $300 = 4.1%	11 Bales/ha @ $475 = 3.0%	11T/ha @ $300 = 1.8%
13T/ha @ $325 = 5.6%	12.5 Bales/ha @ $500 = 5.9%	13T/ha @ $325 = 4.2%

Rice	Cotton	Maize
12T/ha @ $280 = 3.4%	11 Bales/ha @ $450 = 2.3%	11T/ha @ $275 = 1.1%
12T/ha @ $320 = 4.7%	11 Bales/ha @ $500 = 3.8%	11T/ha @ $320 = 2.4%
12T/ha @ $350 = 5.6%	11 Bales/ha @ $525 = 4.6%	11T/ha @ $350 = 3.3%

COTTON SCALE OF PRODUCTION

- Full suite of cotton growing equipment costs $1.5M to $2.0M
  - Annual repayments with or without picker

- **Scale** required (including picker) >500ha
- Without picker >250ha
- Alternatives have own row crop tractor with cultivation equipment and use contractors for primary tillage, planting and harvest

BUSINESS SCALE

Crop Area Available	Area/Return on Capital	Rice	Cotton	Maize
450ha (1/3 Rice)	Area	150ha	185ha	171ha
	ROC	**3.1%**	**2.7%**	**1.2%**
750ha (1/3 Rice)	Area	250ha	308ha	286ha
	ROC	**4.6%**	**4.3%**	**2.9%**
1,500ha (1/3 Rice)	Area	500ha	615ha	571ha
	ROC	**5.2%**	**5.6%**	**4.2%**
2,250ha (1/3 Rice)	Area	750ha	923ha	857ha
	ROC	**5.7%**	**6.5%**	**4.6%**

SUMMARY

Cotton will suit those with:

- Strong balance sheet
- Access to cash
- Row crop layouts
- Free draining soils
- Scale
- Sufficient channel capacity (daily supply)

Rice is best suited for:

- Typical family farm business
- Modest balance sheets
- Existing irrigation layouts
- Heavy soils
- Growers who grow rice well

KEY POINTS

- Make decisions based on whole farm analysis of profit and return on capital
- Assess cashflow implications
- Understand sensitivities – downside risk
- High cost of production for cotton demands scale

CLOSING

- Don’t chase rainbows
- Budget properly (3 to 5 years out)
- Recognise linkages between your profit and loss and balance sheet
- Make sure your financier understands and supports what you are doing
- Make decisions based on your preferred long term strategy