Advisors to Australian Agriculture

REDEFINING BEST PRACTICE

Nuffield Farming Scholars Conference

Wednesday 27th February 2008

Armidale • Ararat • Ballarat • Bendigo
Euroa • Mansfield • Tarwin Lower • Wagga

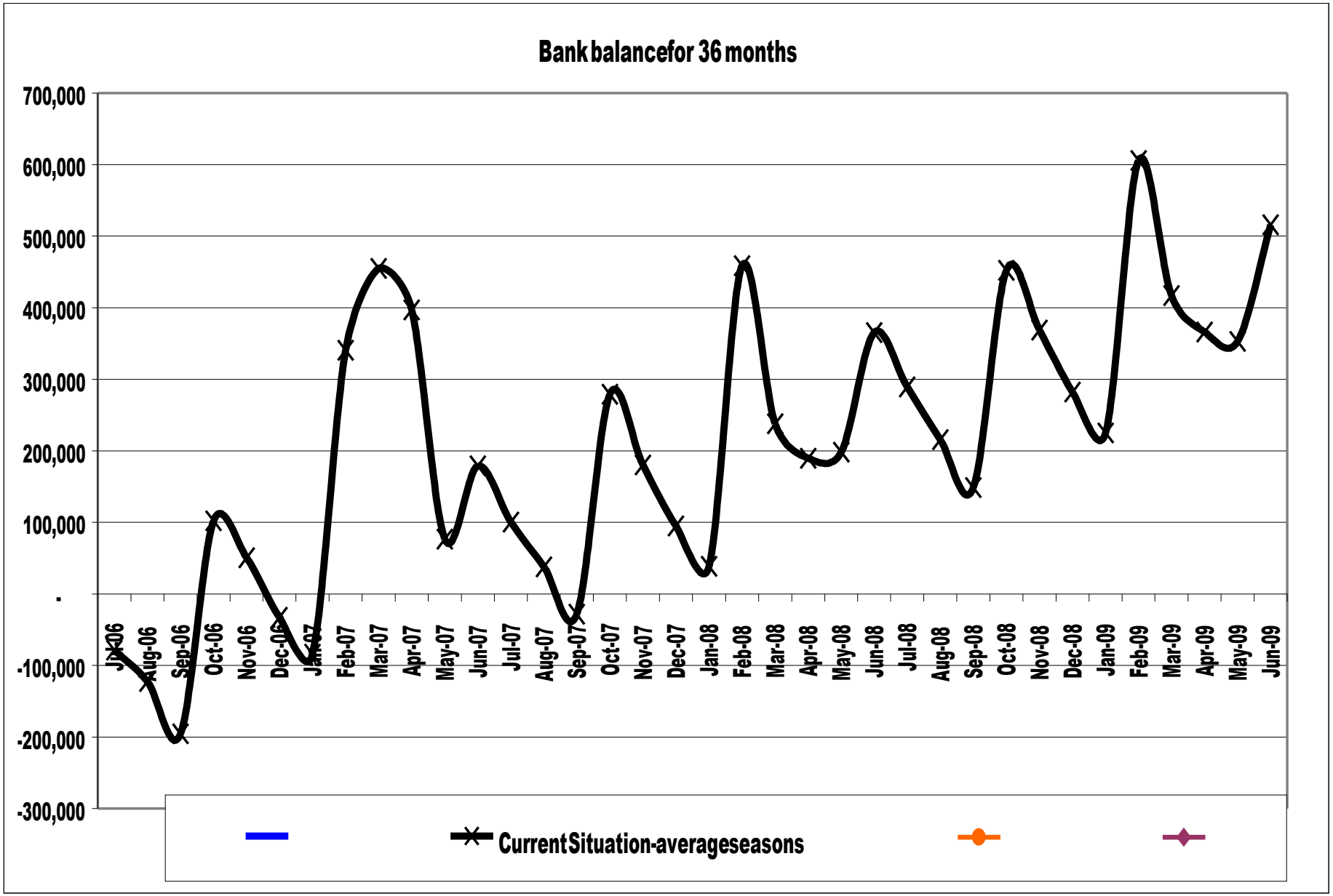
THE EFFECT OF THE DROUGHT
2 CASE STUDIES

- Assess 2 case studies for:
  - High rainfall South West Slopes region
  - Range in size and enterprise mix (40%-70% cropping)
  - Both carrying debt, but with 70%- 80% equity
  - Different ability to bounce back from drought

  Look at:
  - the 3 year effect of the drought on cash flow
  - The effect of farming systems on profitability
  - The importance of livestock in reducing risk.

Understand the importance of analysing the long term effect of your decisions

Harden Farmer



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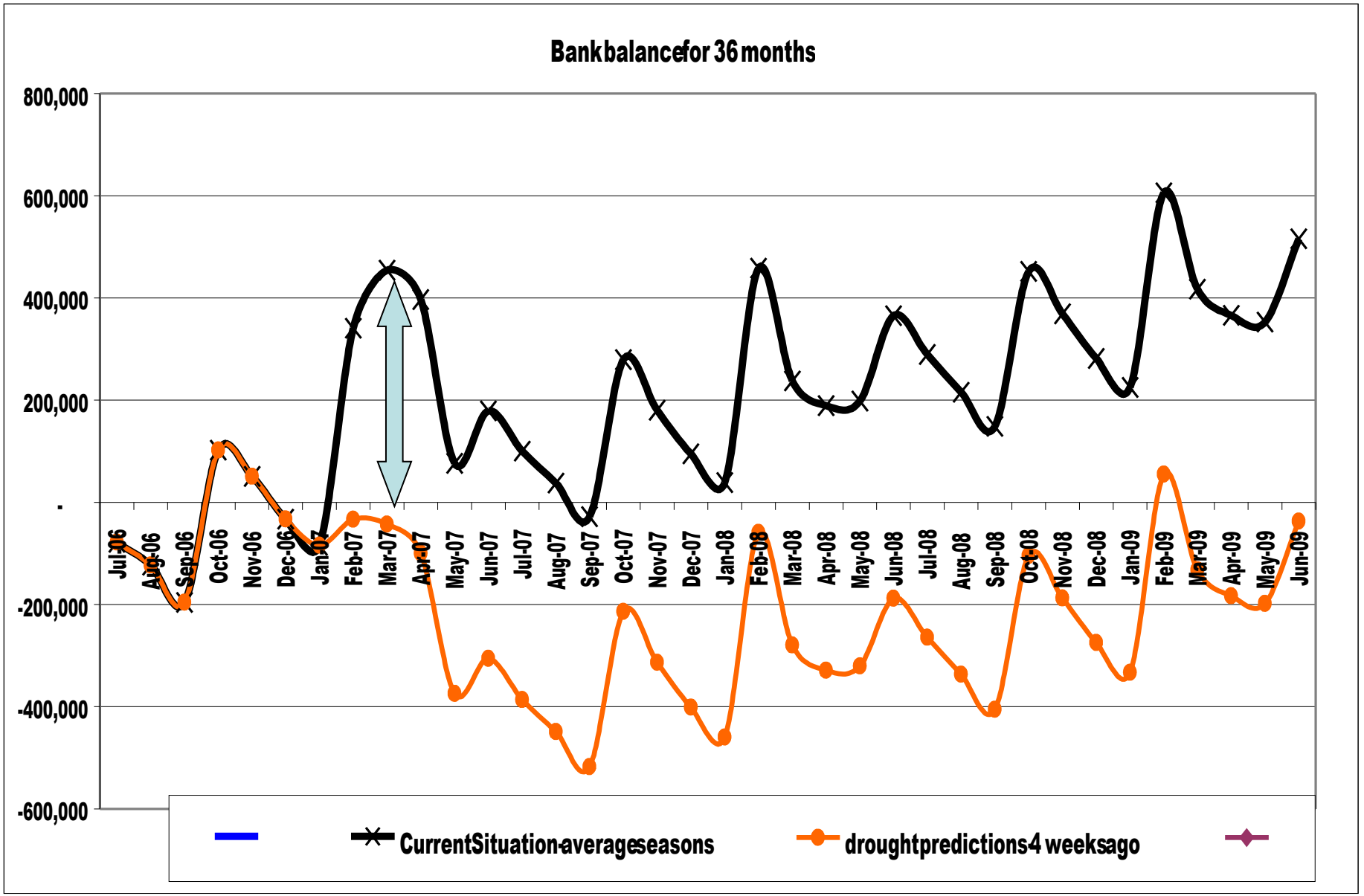

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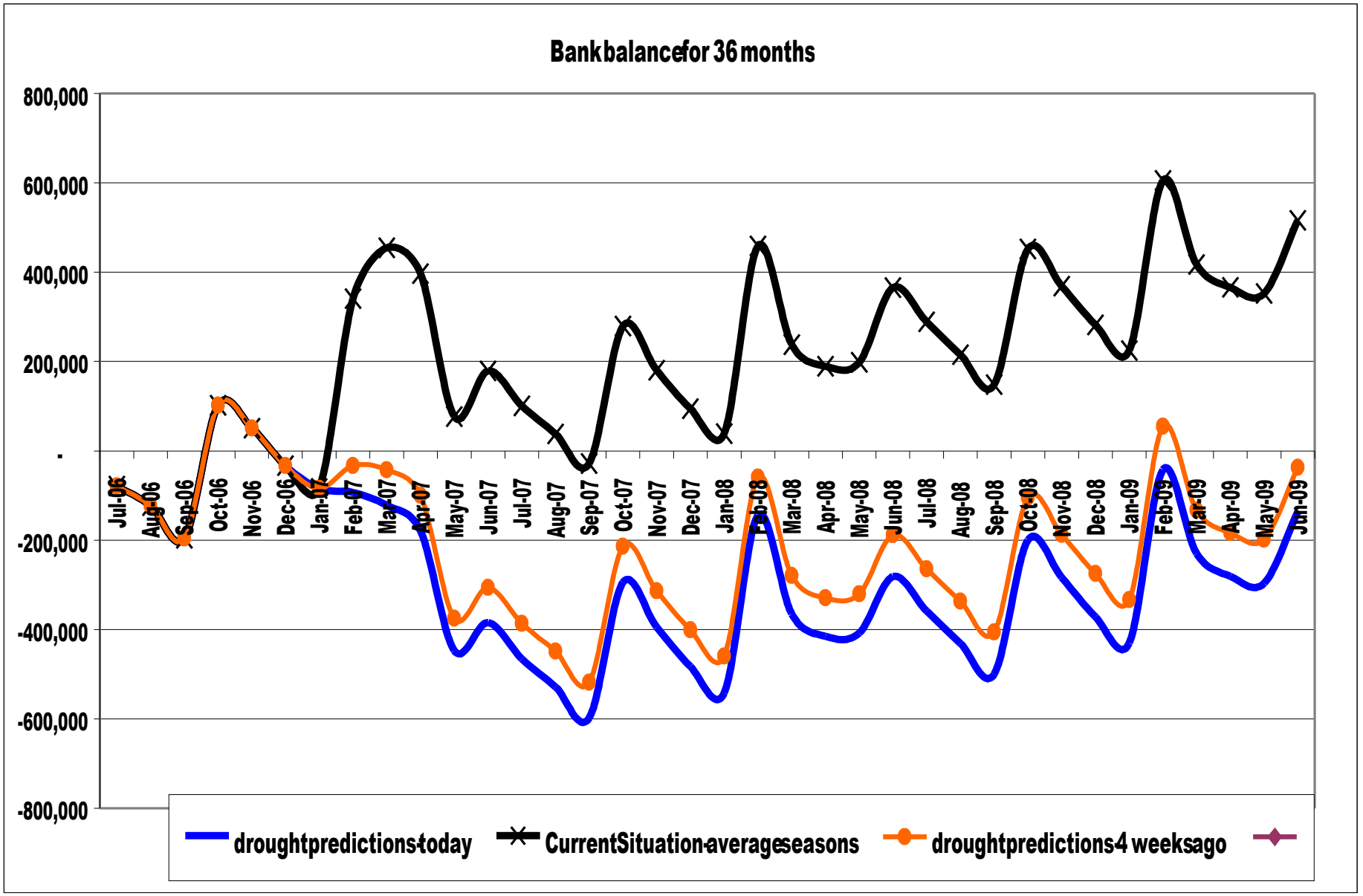

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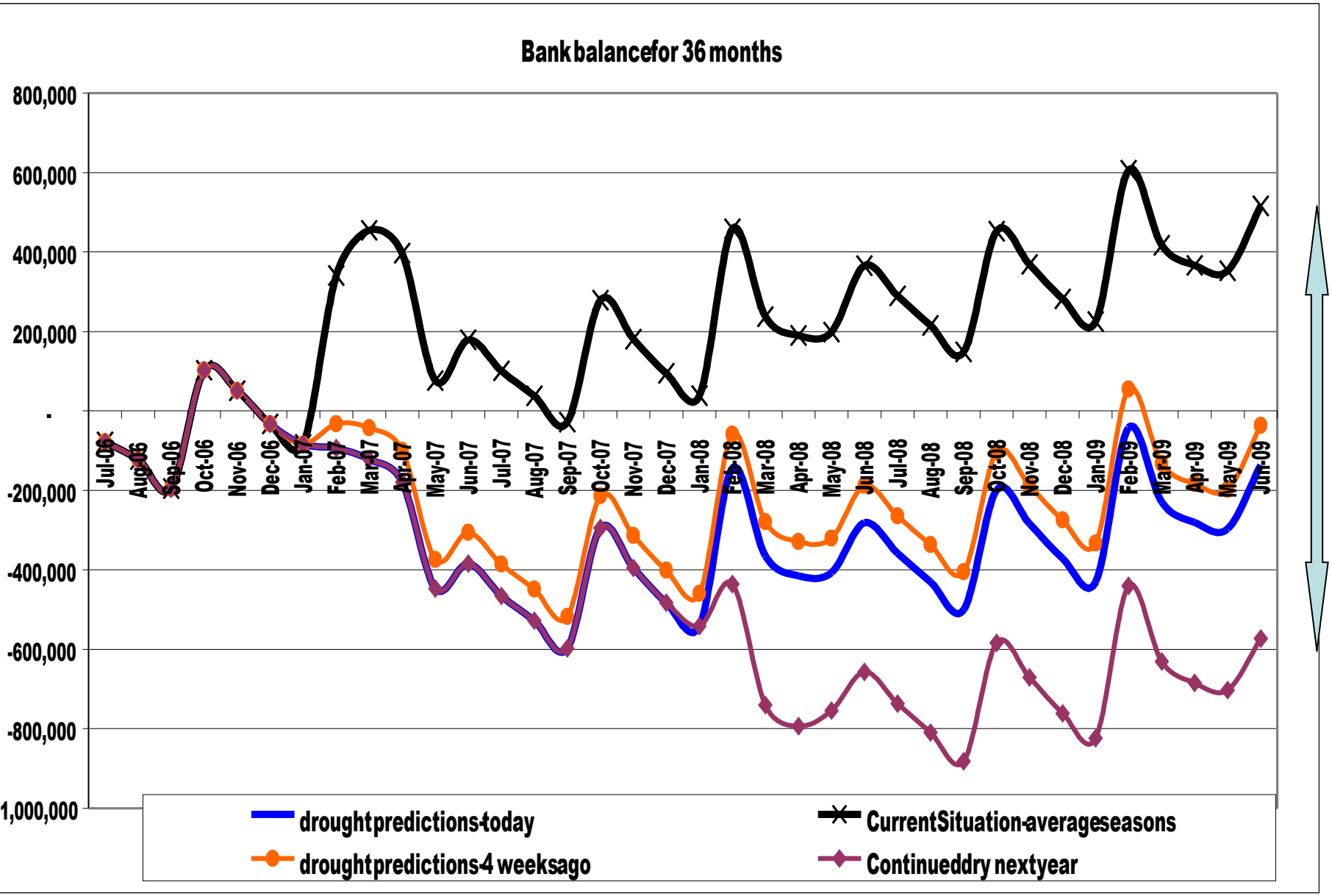
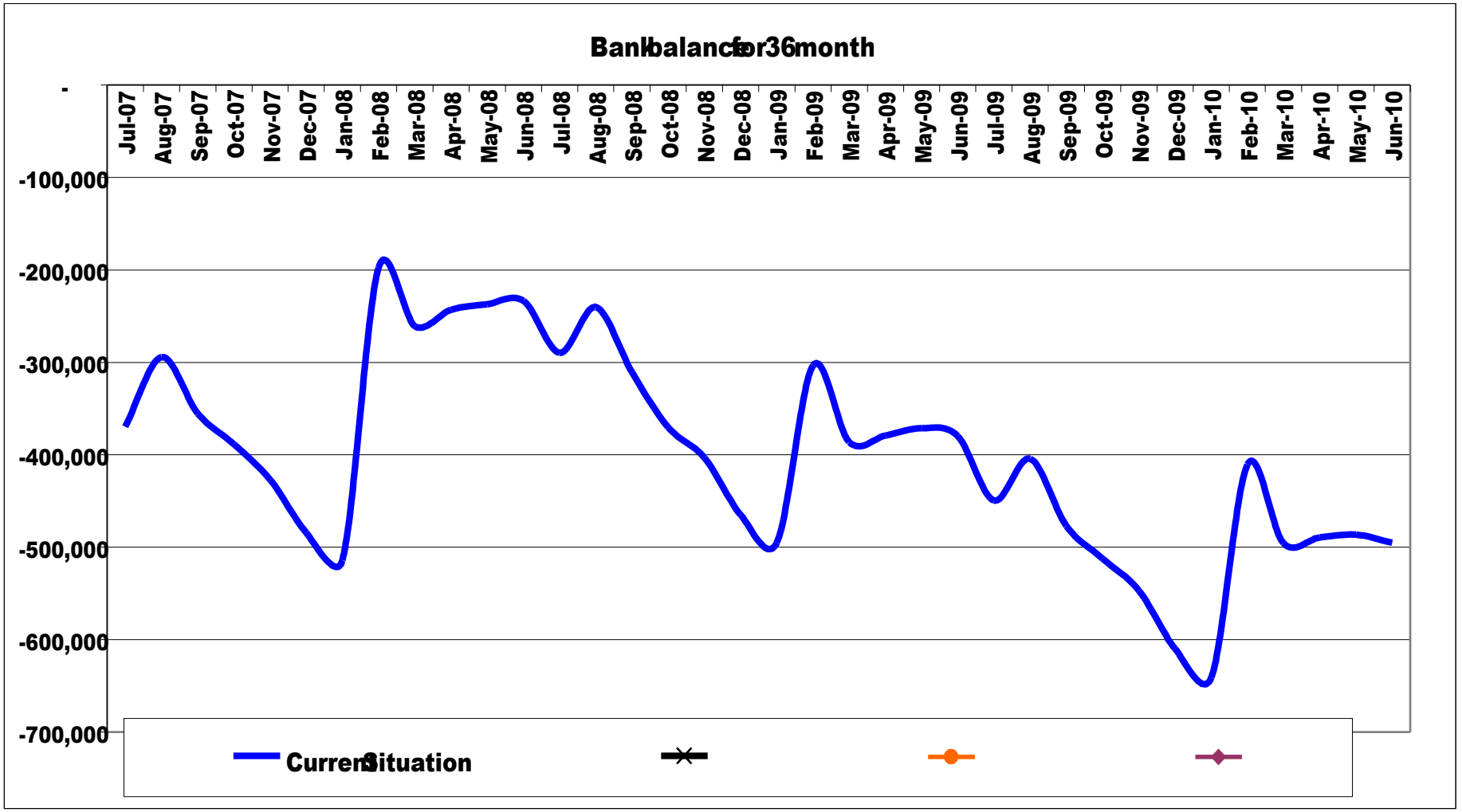


FARM 1

- Profitable and viable
- Could recover from 2006 without any changes
- Predicted to lose $600,000 because of 2006 drought
- May lose $1m after 2007 drought

Harden Farmer B



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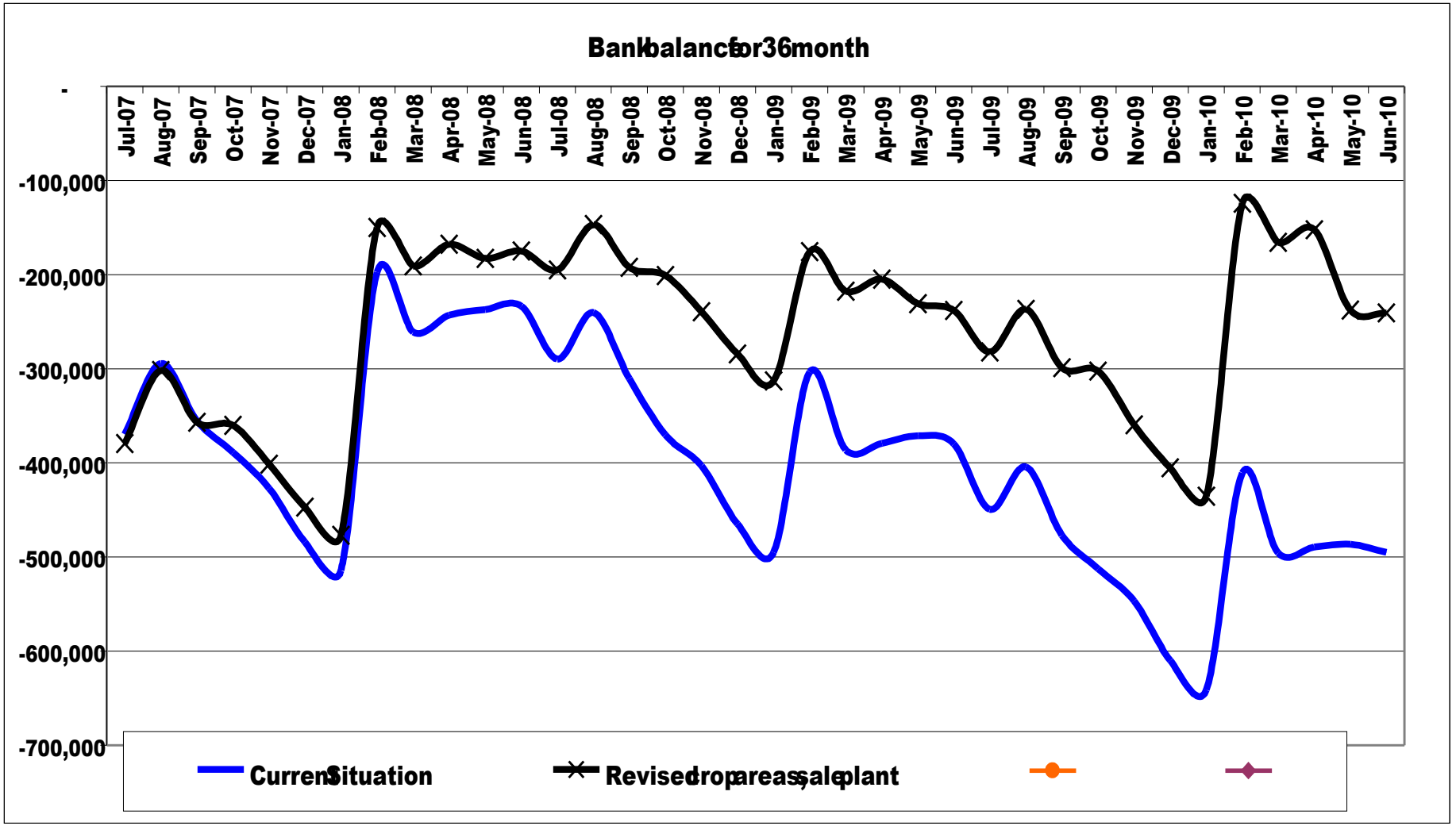

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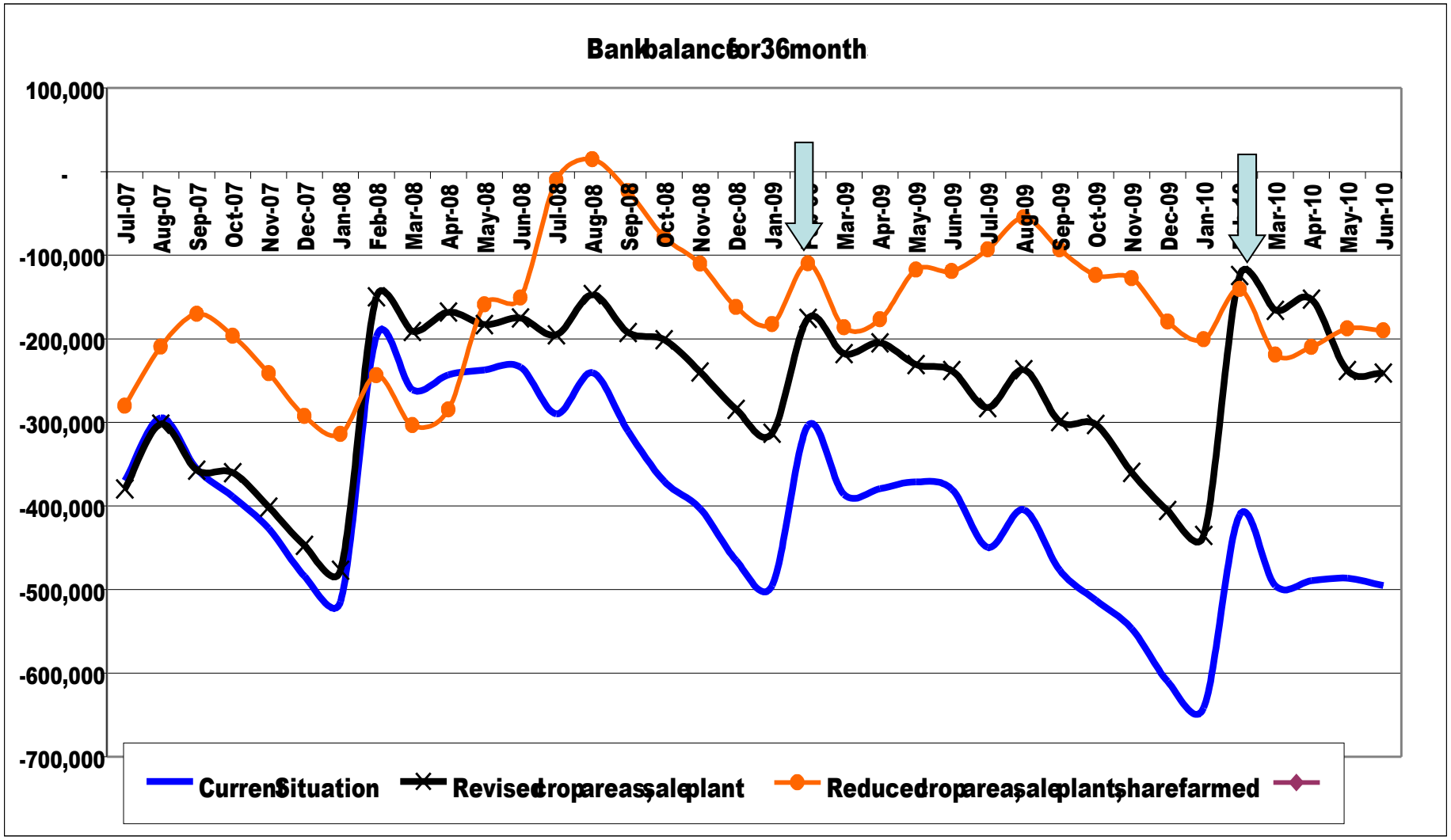

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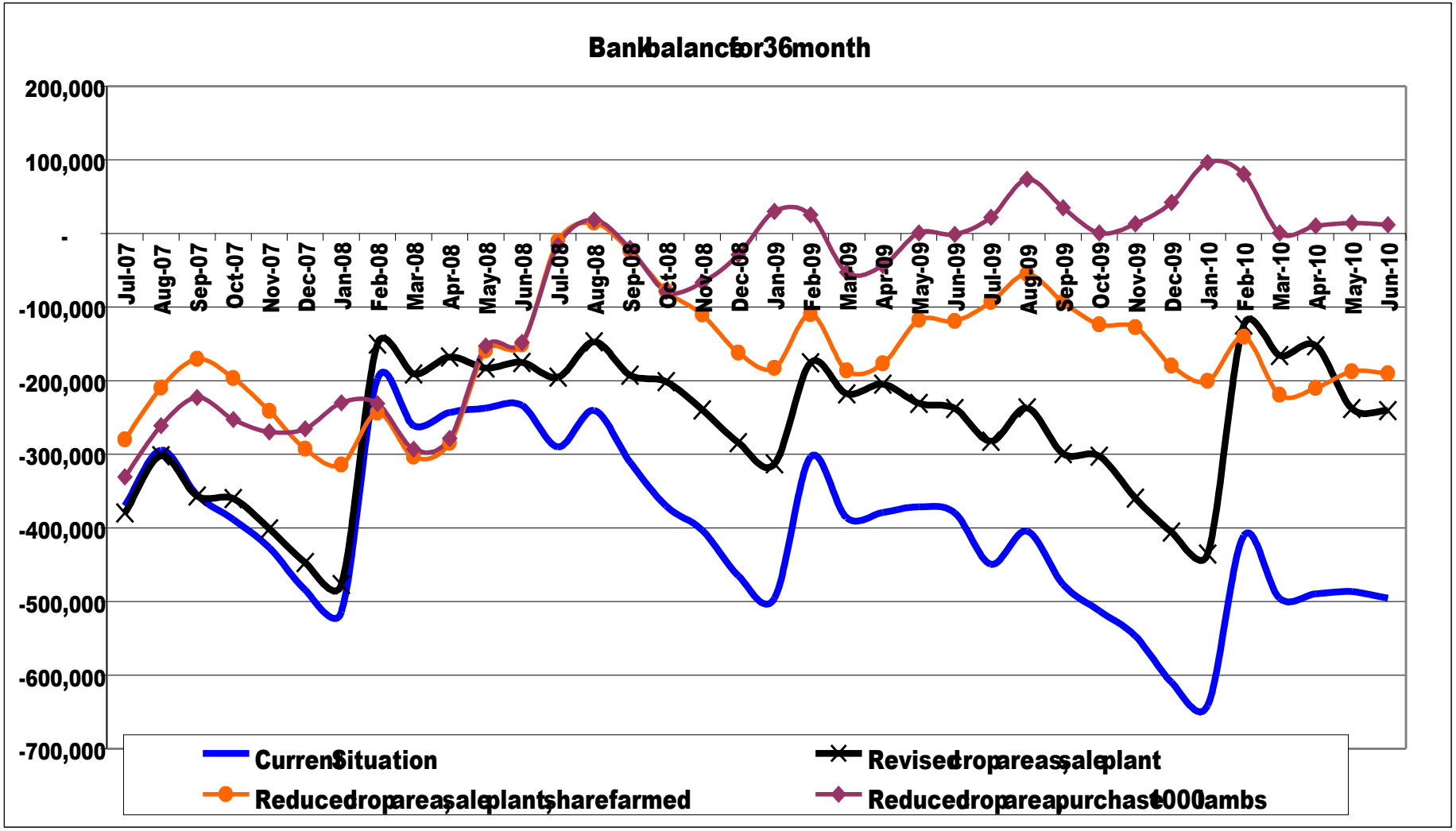


FARM 2

Can recover but needs to change

- farming system
- sell machinery
- use sharefarming

ie reduce fixed costs, free up capital

Luckily likes sheep

ABILITY TO RECOVER

Farm 1

Can recover without any changes

Farm 2

Can recover but needs to change

POINTS TO REMEMBER

In both cases

- Agronomy was best practice
- Gross margins were similar

Technology was not the answer

- Differences were in overheads (labour & drawings, interest, repairs, admin)
- All would have been profitable without debt. Significantly all budgets were run without repayments
- All ran inflexible systems (income varied, costs were fixed)

In all cases the problem lay in business management

Current farm business model flawed because

3. Few costs linked to output.
4. Fixed costs maximised
5. Little understanding of risk
6. No incentive for diversification
7. No investment guidelines
8. Poor commercial education

Results in growing debt, poor performance compared with non-farm businesses

What do other businesses do?

PRIORITIES	Farms	Non-farm
% Costs linked to output	<30%	>70%
Risk drives management	N	Y
Diversified investments	y	Y
Commercial training priority	N	Y
Profit focused	N	Y
Productivity limited	Y	N
Management valued	y	Y

Anomalies – farm structure

Similar farming system for whole of southern Australia including farms with

2. different productivity & resources
3. different risk profiles
4. widely divergent equities
5. hugely different skill levels
6. different life goals

Double check the messages..

Anomalies - Management

- Why do capital and labour increase together?
- Why do the most productive farms often have the highest debts?
- Why do risk management tools usually increase risk?
- Why are returns less than savings bank interest accepted as the norm?

Double check the messages!

What is best practice?

- Best practice is usually defined as the system giving the best gross margins in average years.

What is wrong with that?

What is wrong with Gross Margins?

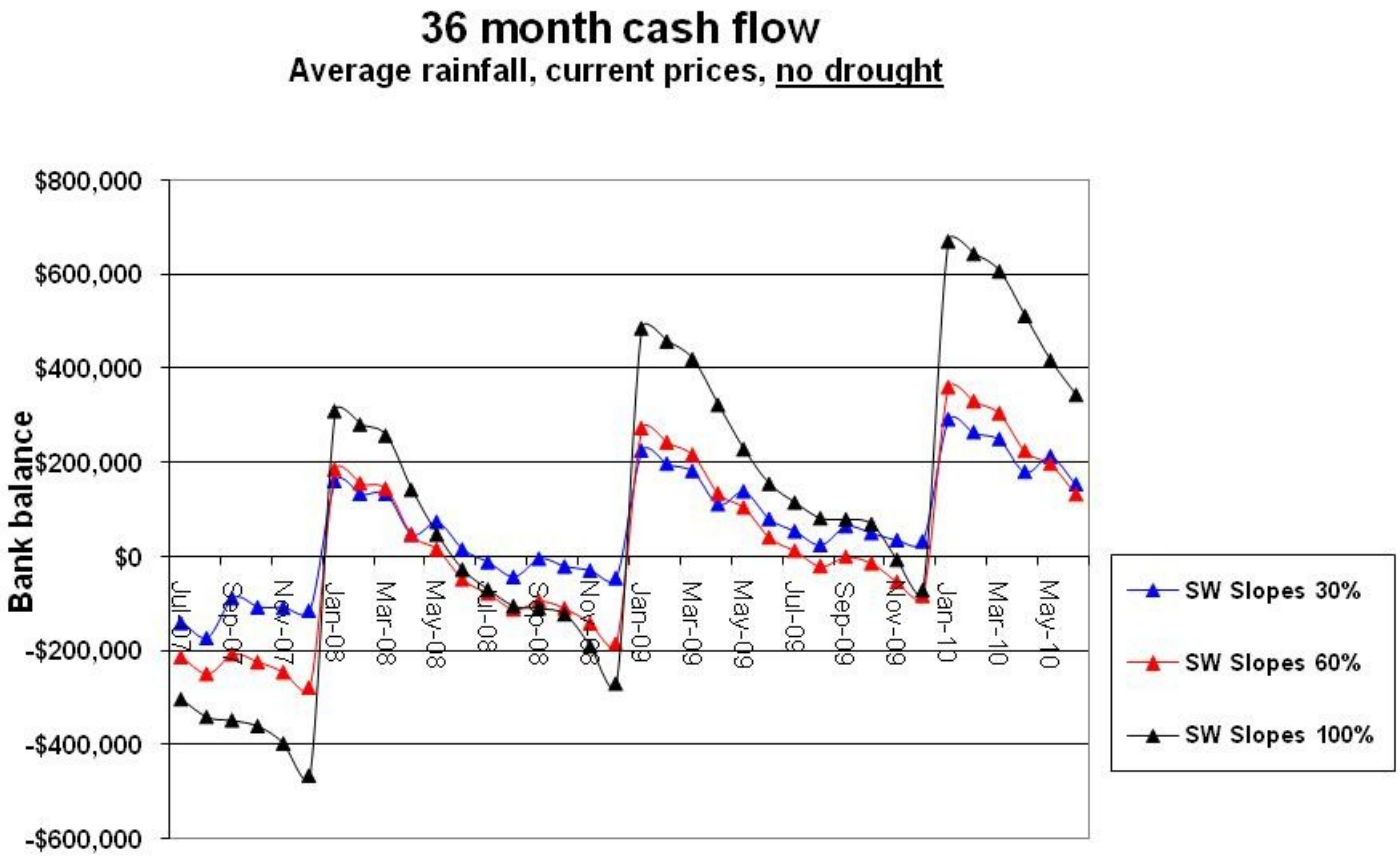
Graphical representation of costs included in financial indicators

SW Slopes farm, 60% crop		Costs included in		
Costs per hectare		**Gross margin**	**Profit**	**COP**
Crop & Pasture Costs	**134.99**			
Chemical	36.29			
Contract	21.14			
Crop Insurance	7.44			
Fertiliser	49.53			
Seed	20.58			
Supplies & Grain Purchased	0.00			
Other	0.00			
Livestock Costs	**107.52**			
Agistment & Rations	8.65			
Animal Health & Veterinary	4.62			
Fodder	1.99			
Freight	0.00			
Purchases	1.17			
Shearing & Crutching	4.69			
Other	4.69			
Variable costs	**242.50**	$243	$243	$243
Machinery (incl. depreciation)	132.32			
Labour	27.70			
Overheads	87.32			
Interest	93.54			
Fixed Costs	**340.88**		$341	$341
Total Costs (including depreciation)	**501.67**			
Capital costs	**28.00**			$28
Drawings & Tax	**63.66**			$64
Total costs included $/ha		**$243**	**$583**	**$675**
Percentage of total costs		**36%**	**86%**	**100%**

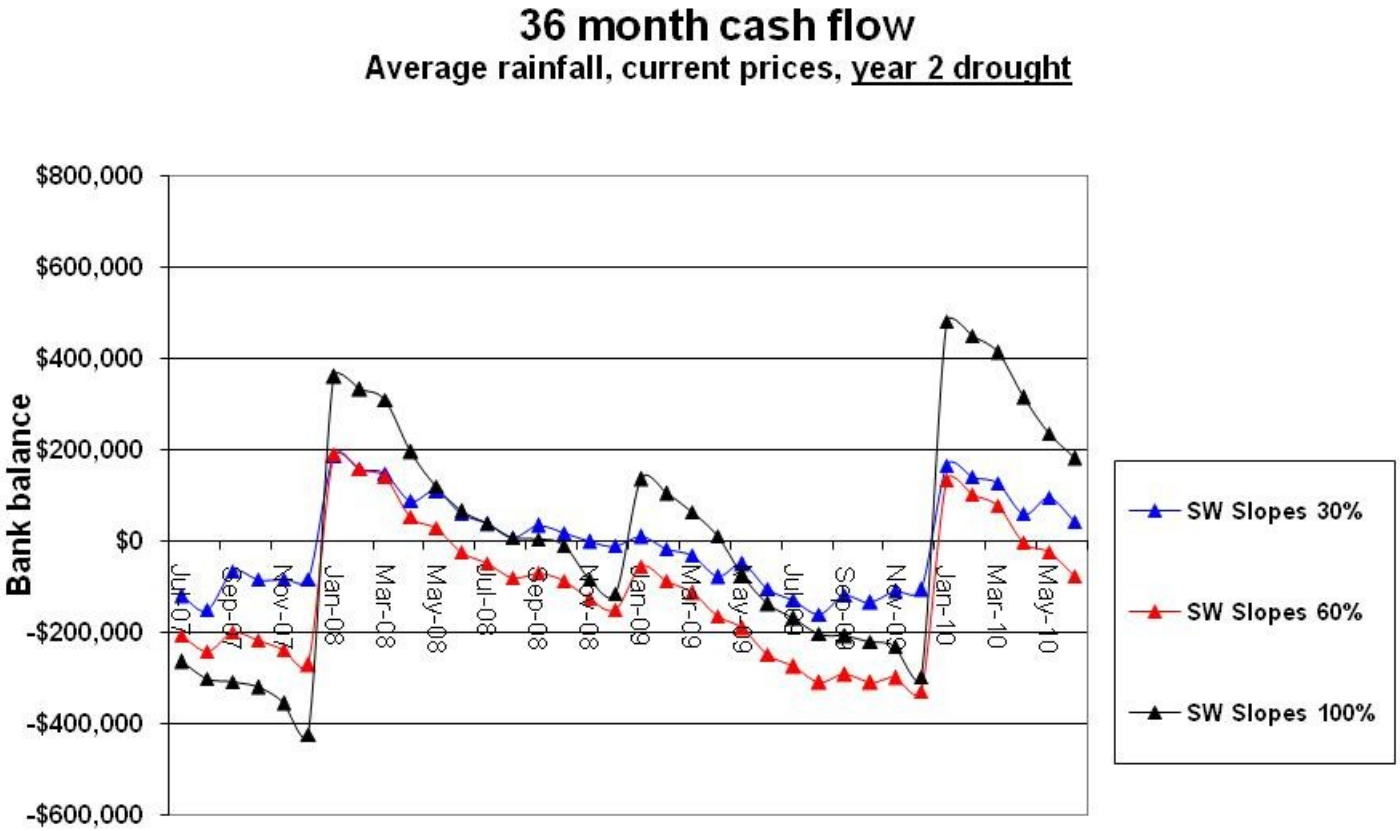
What is wrong with gross margins?

- They are usually positive
- They only include some of the costs.
- They do not allow for risk due to
  - Rainfall variability

What about risk?

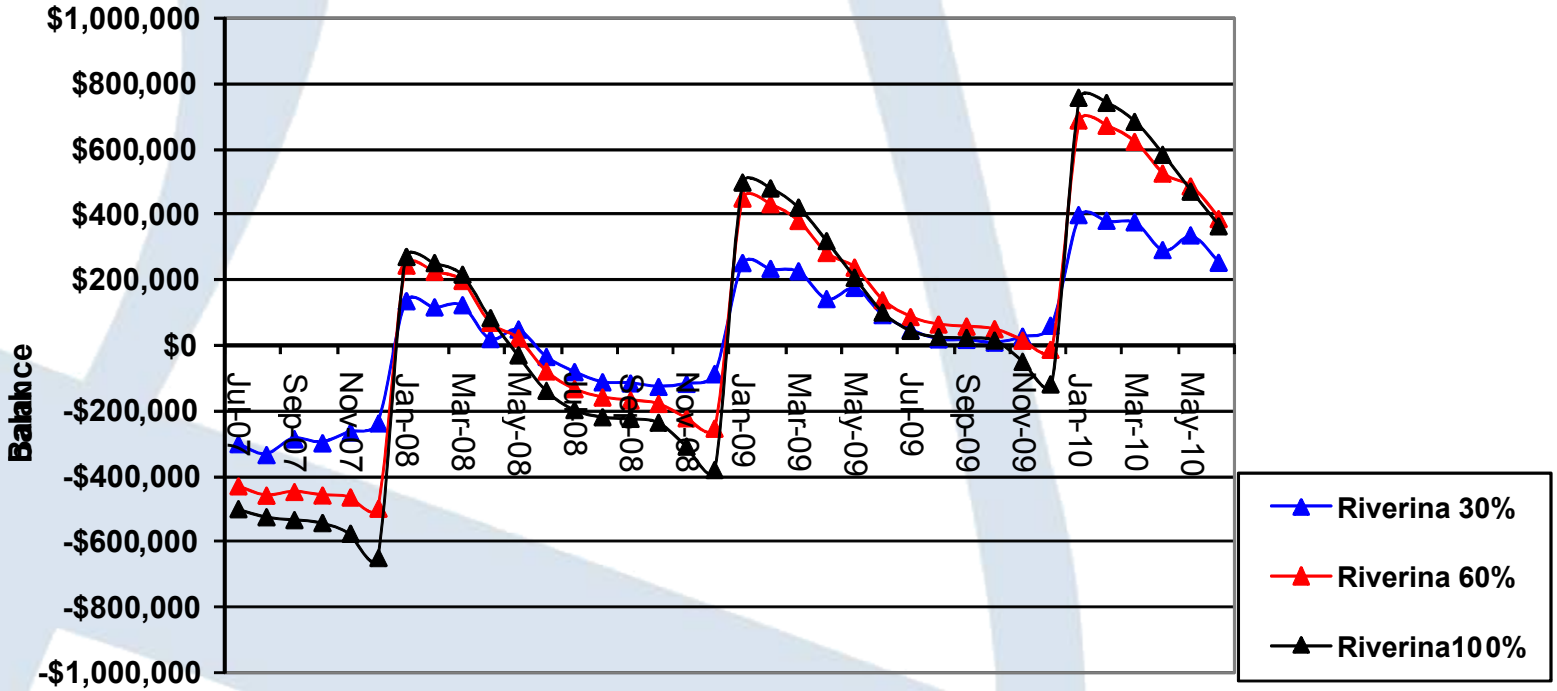


What about risk - drought

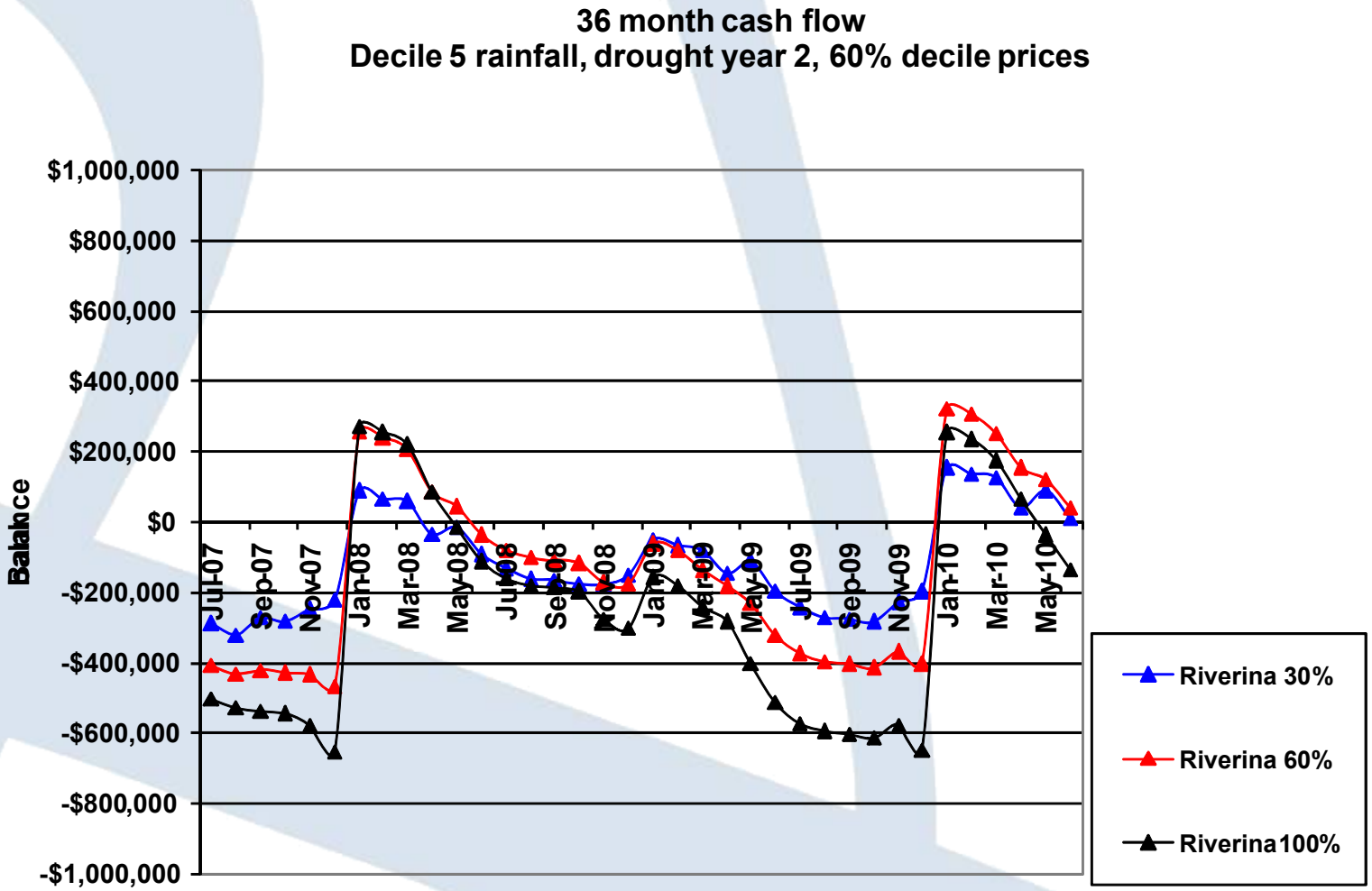


Riverina cash flow – no drought

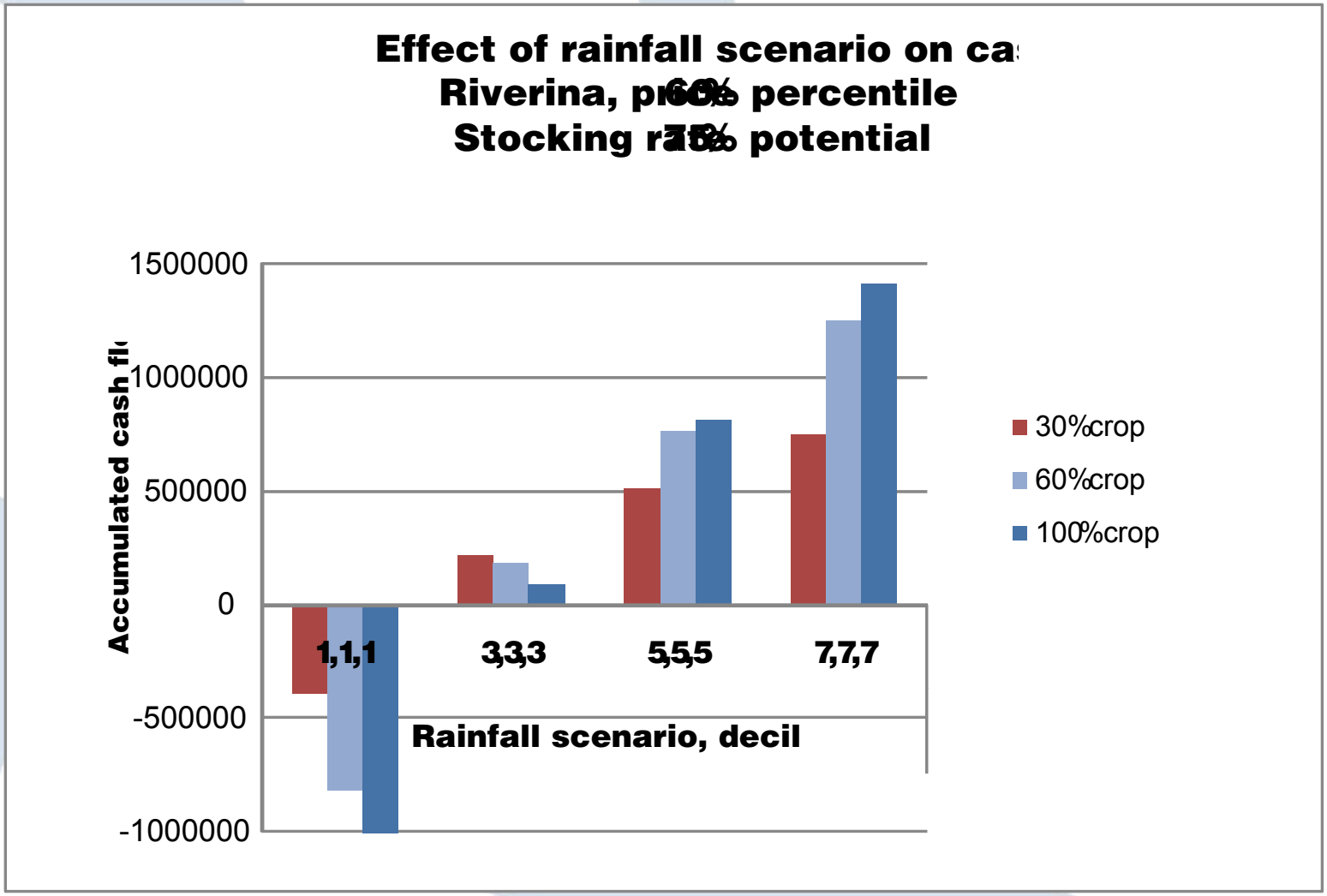
FIGURE 6: 36 month cash flow
Decile 5 rainfall, 60% decile prices



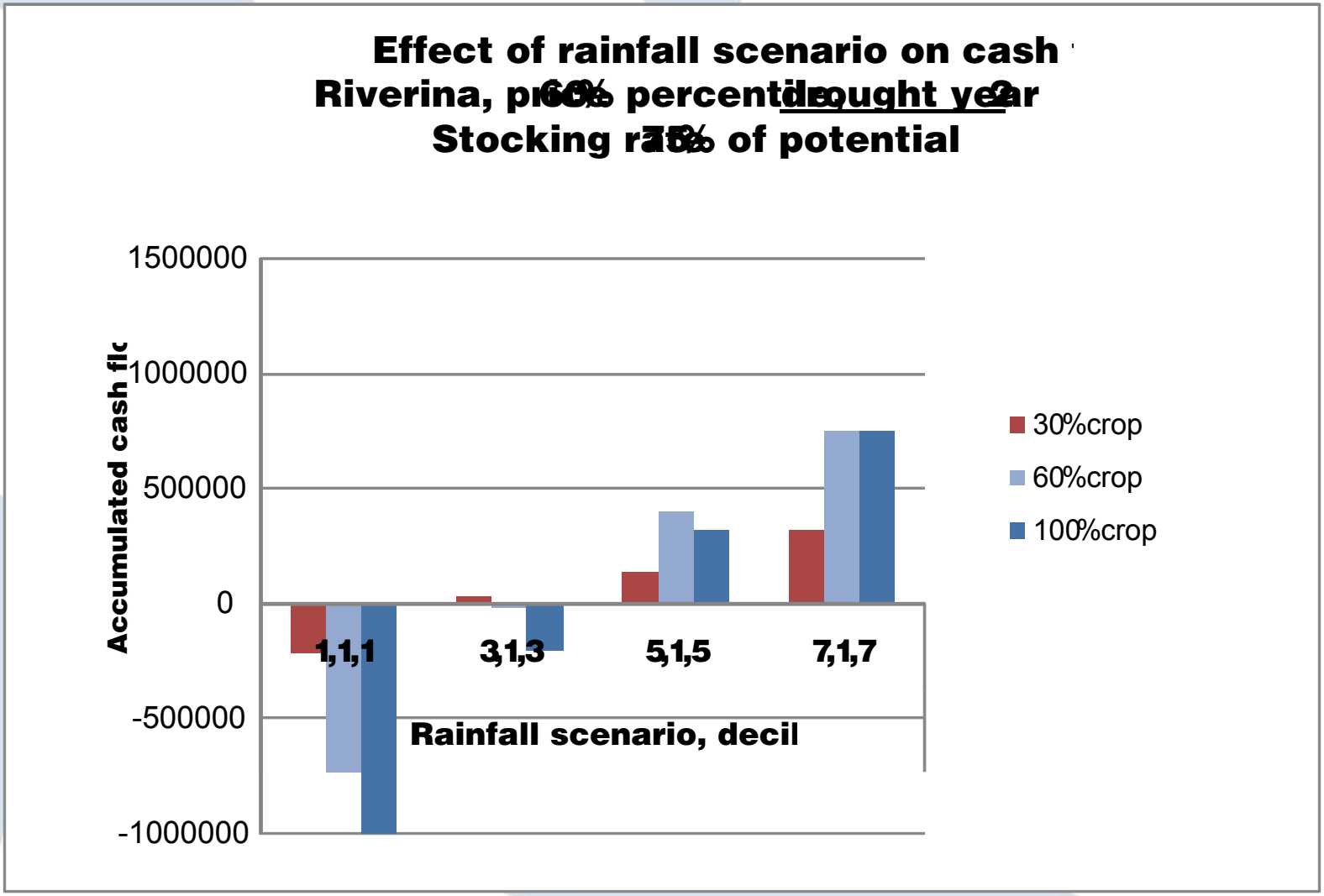
Riverina cash flow – drought year 2



What about the season? Riverina



What about the season?
Riverina – drought year 2



What is wrong with gross margins?

- They are usually positive
- They only include some of the costs.
- They do not allow for risk due to
  - Rainfall variability
  - Price variability

Effect of price on cash flow

Effect of price on 3 year cash flow
Average rainfall, no drought

SW Slopes 30% crop	Equivalent ewe price	Crop price percentile 10%	30%	60%	90%	Difference 90% price -10% price
Sheep price Percentile	$/head	Equivalent wheat price $/tonne $140	$191	$268	$344	
10%	$30	-349,889	-198,608	28,315	255,237	$605,126
30%	$45	-254,371	-103,089	123,833	350,755	$605,126
60%	$68	-111,093	**40,188**	267,110	494,032	$605,126
90%	$90	32,184	183,466	410,388	637,310	$605,126
Gain 90%-10%		382,073	382,073	382,073	382,073	

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Average rainfall, drought yr 2

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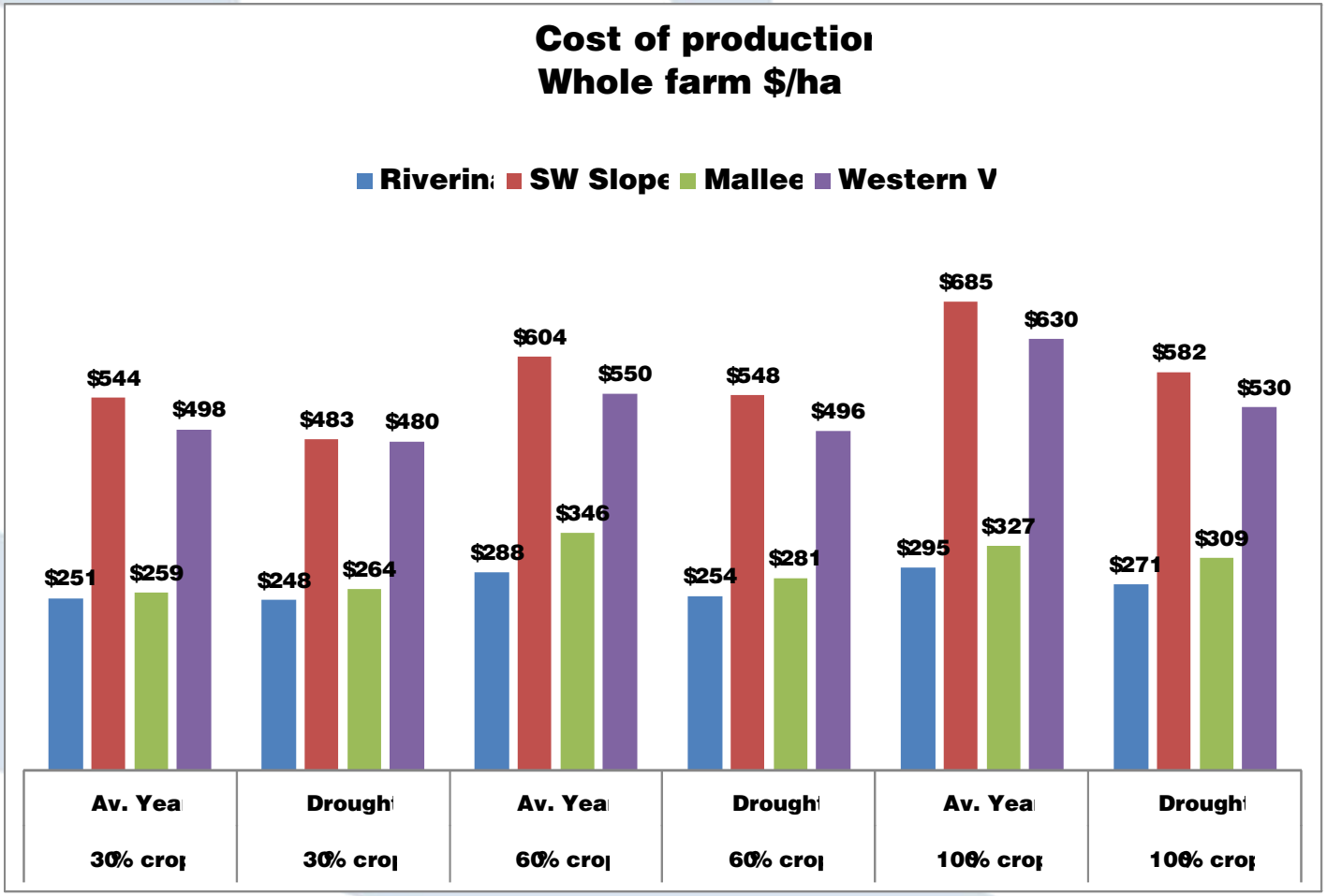
10%	$30	-362,307	-250,693	-83,271	84,151	$446,458
30%	$45	-272,876	-161,262	**6,160**	173,581	$446,458
60%	$68	-138,730	-27,116	140,306	307,727	$446,458
90%	$90	-4,584	107,030	274,452	441,873	$446,458
Gain 90%-10%		357,723	357,723	357,723	357,723	

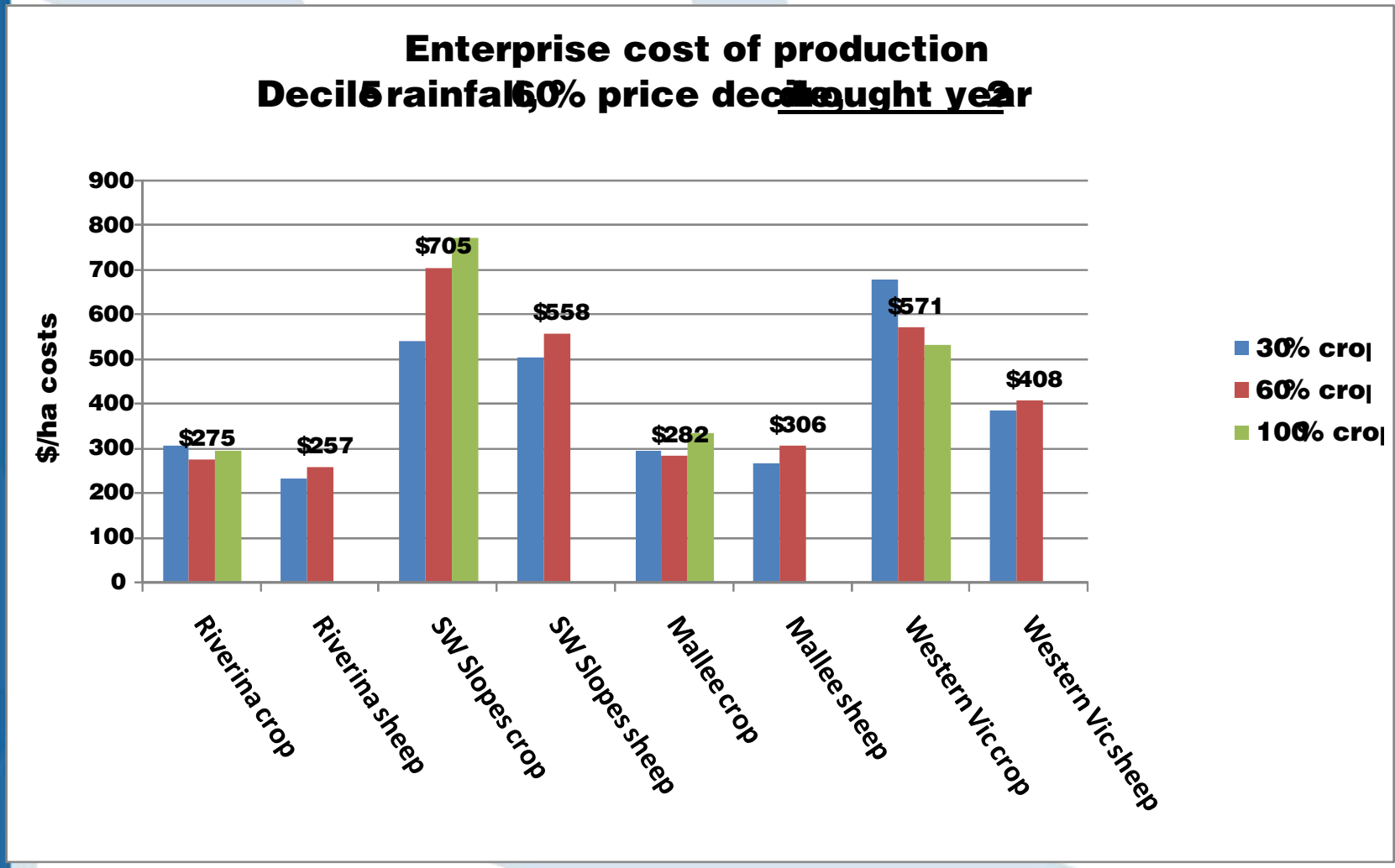
Dealing with risk

- Know your cost of production

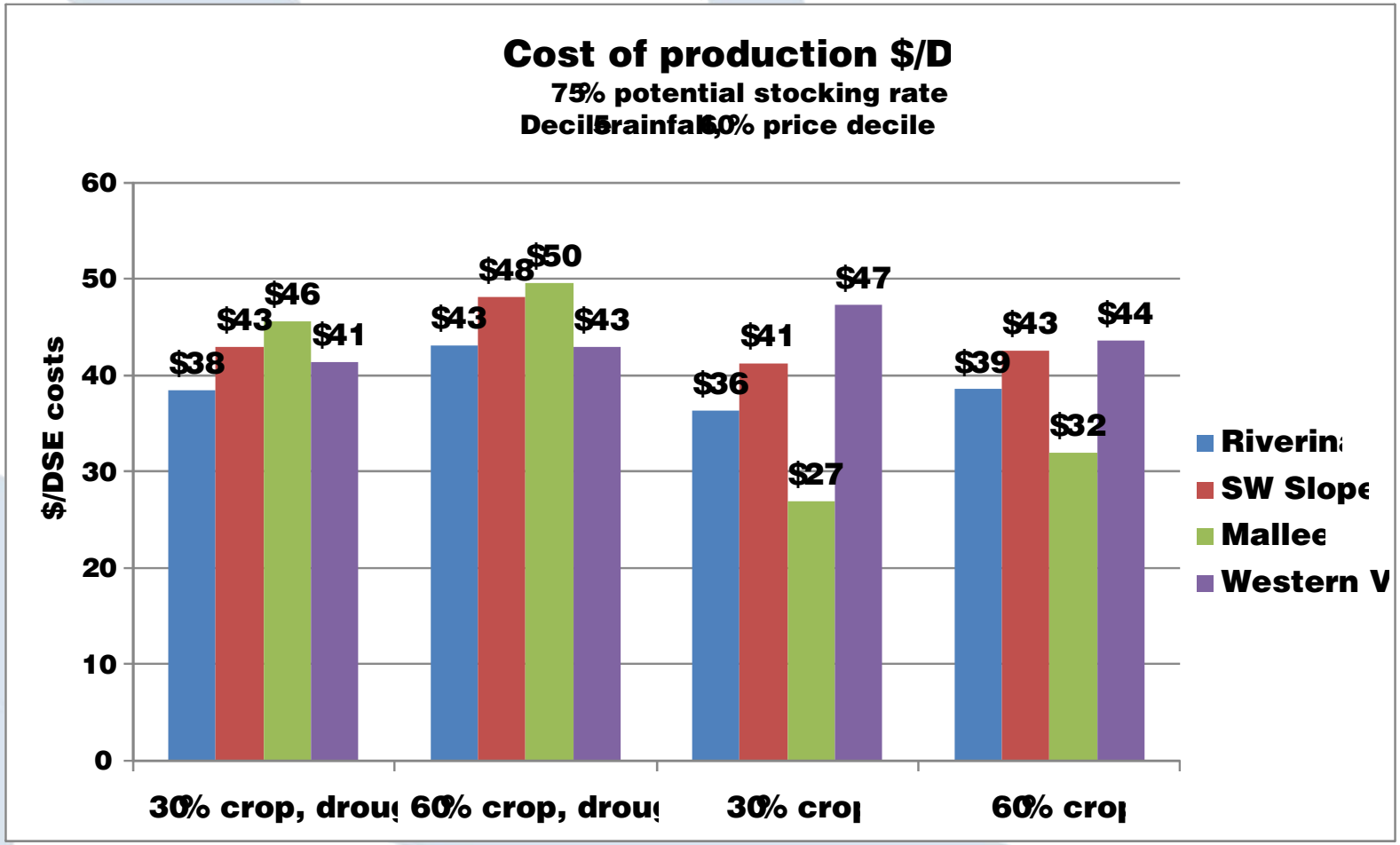
Cost of production
Whole farm $/ha



Enterprise cost of production



Costs per DSE



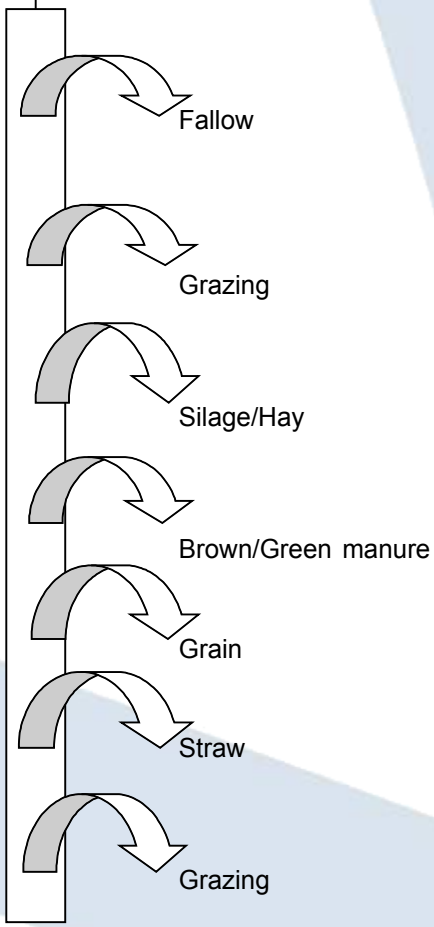
Dealing with risk

- Know your cost of production

- Build in flexibility
  1. Number of markets not number of products
  2. Simplify
  3. Specialise production
  4. Diversify investments

Build in flexibility

Crops aren't only for grain



Principles of flexible farming

- **Diversification** means maximising the number of markets, not the number of products.
- **Flexibility** is vital. Outputs must be able to be varied constantly.
- **Averages are meaningless** in a variable system.
- **Best practice changes** constantly.
- **Cash flow is king.**

THE PLACE FOR LIVESTOCK

- SIGNIFICANTLY reduce overall costs per ha (machinery, labour, inputs)
- Reduce potential income, especially at lower stocking rates
- Costs vary in proportion to income
- Reduces overall income volatility
- Creates greater flexibility in system, and adaptability to the season.
- Possible significant cash injection back into the business from surplus machinery

TAKE HOME MESSAGES

- Assess your options for change against each other for *your* farm.
- Analyse everything from a cashflow perspective. Can you afford the peak debt?
- Use long term budgeting tools

  (like the MS&A Farm Wizard Program)

REMEMBER

- Continuous small profits are more important than windfalls
- You need to be in the business of minimising losses, not maximising profits
- Know your numbers, be open to change and make strategic decisions with risk in mind.

Always plan for a drought, but expect a good year.

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Effect of price and drought

Effect of price on 3 year cash flow
Average rainfall, no drought

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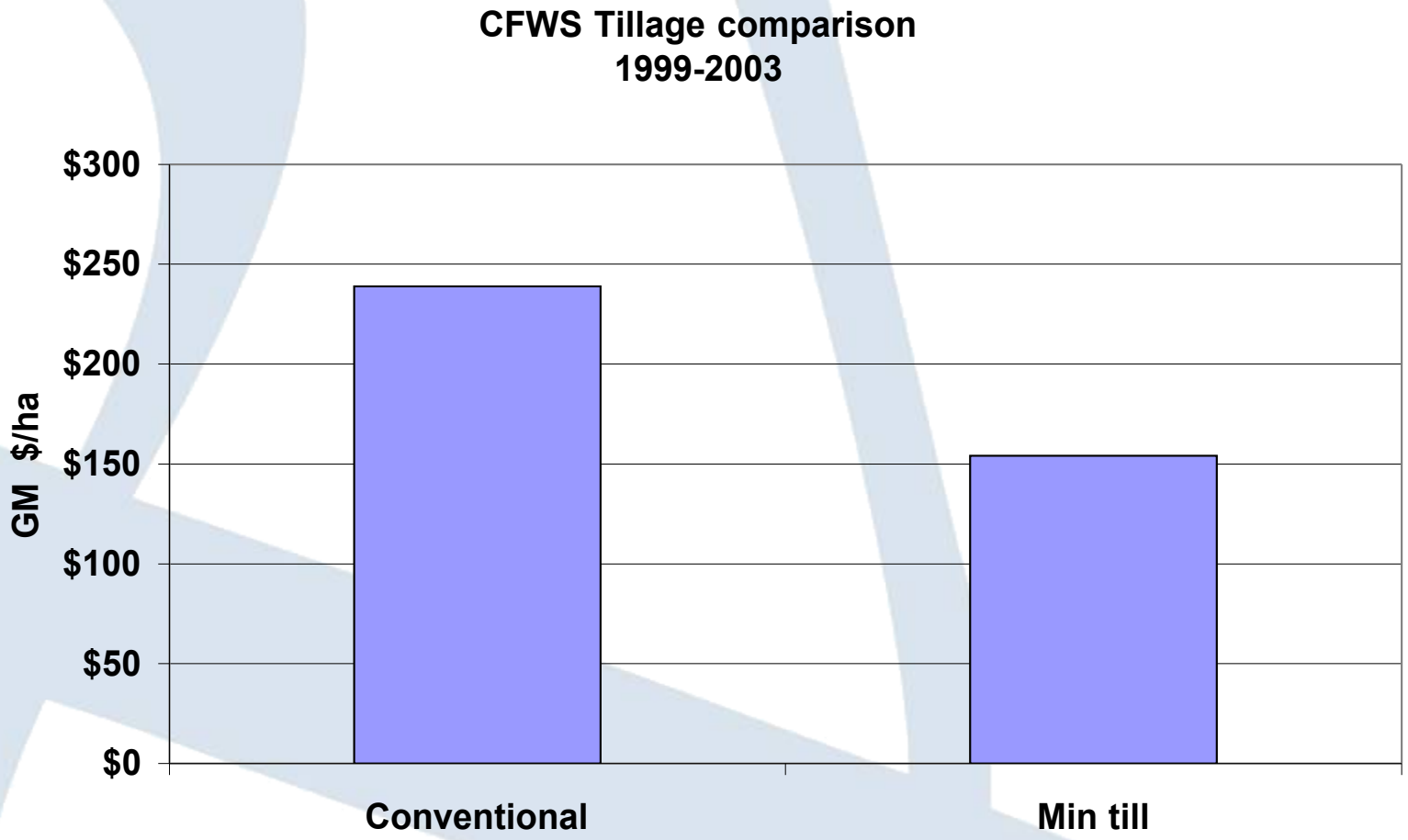
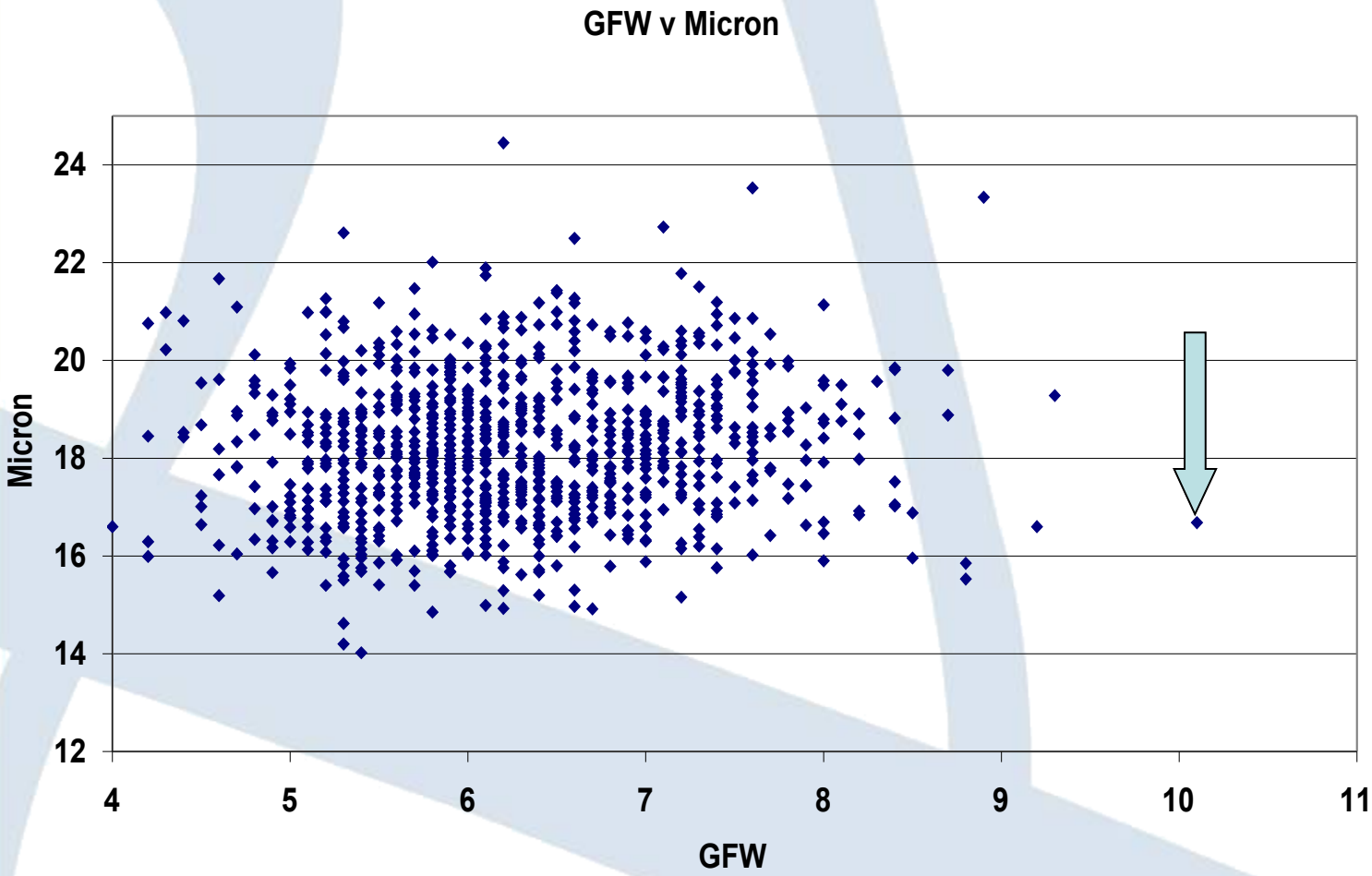
90%	$90	-4,584	107,030	274,452	441,873	$446,458
Gain 90%-10%		357,723	357,723	357,723	357,723	

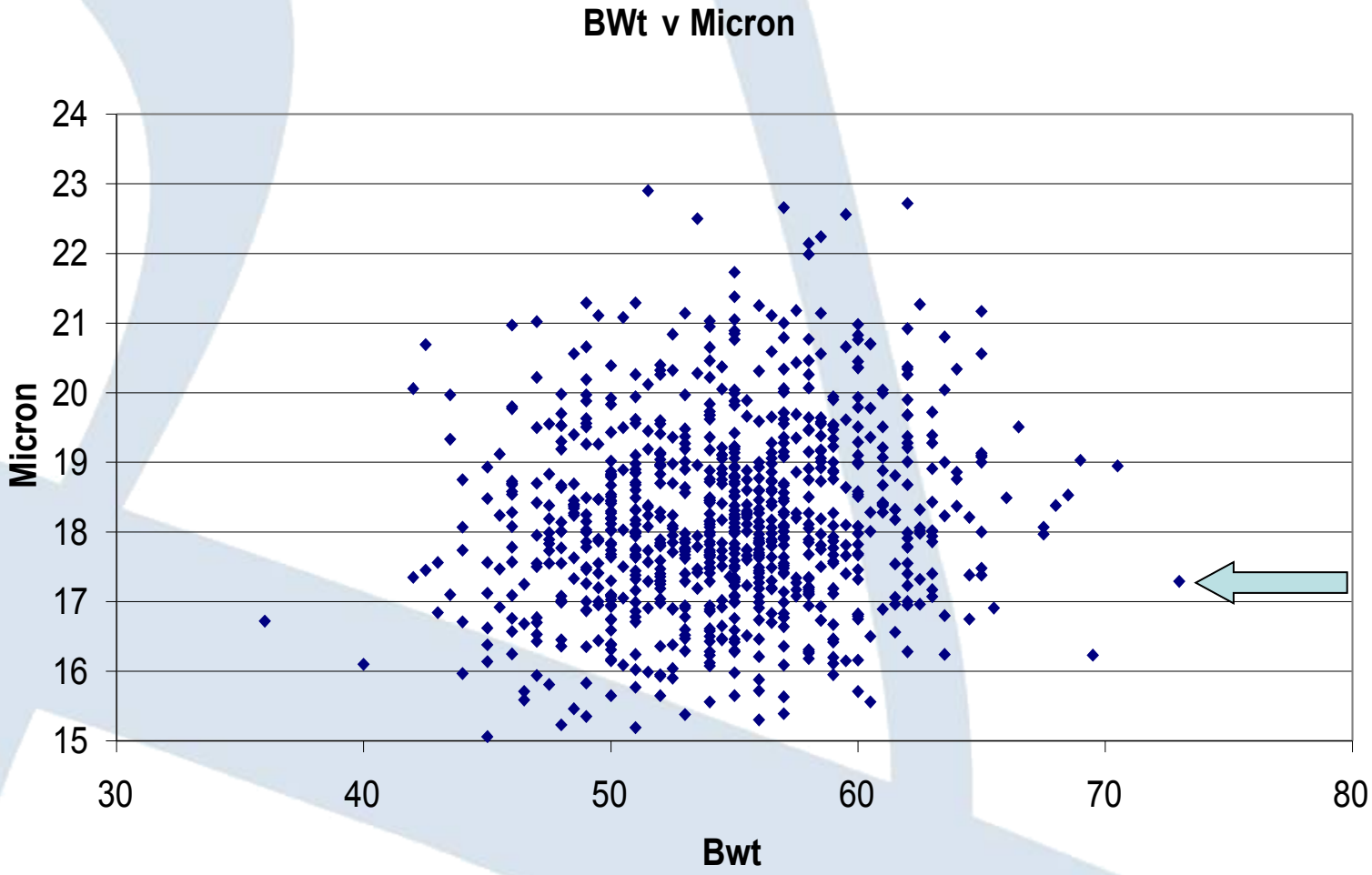
What is the ideal tillage system?



Fine sheep cut less wool



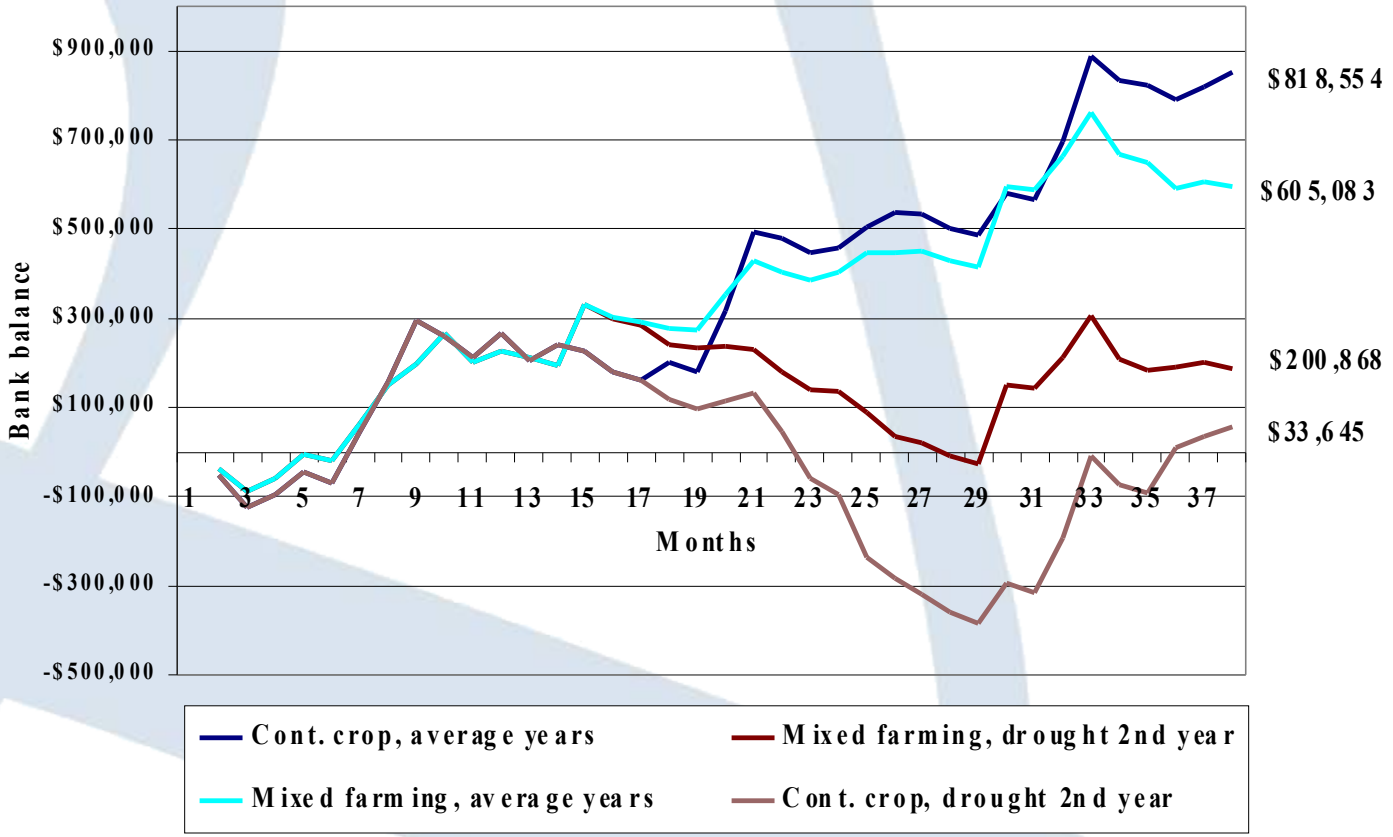
Fine sheep are always smaller



What is best practice?

What is the best enterprise mix?

Figure 2: Effect of sheep on cash flow



BEFORE MOVING INTO MORE LIVESTOCK

- **Do the sums:**
  - Know your profit per ha for each enterprise
  - Know the cashflow effect of the change
  - Can you afford to buy the livestock?

- **Options (in usual order of profitability):**
  - Trading
  - Backgrounding
  - Agistment
  - Breeding

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FOUNDED 1983

What risk can you afford?

Effect of price on 3 year cash flow
Average rainfall, drought year 2

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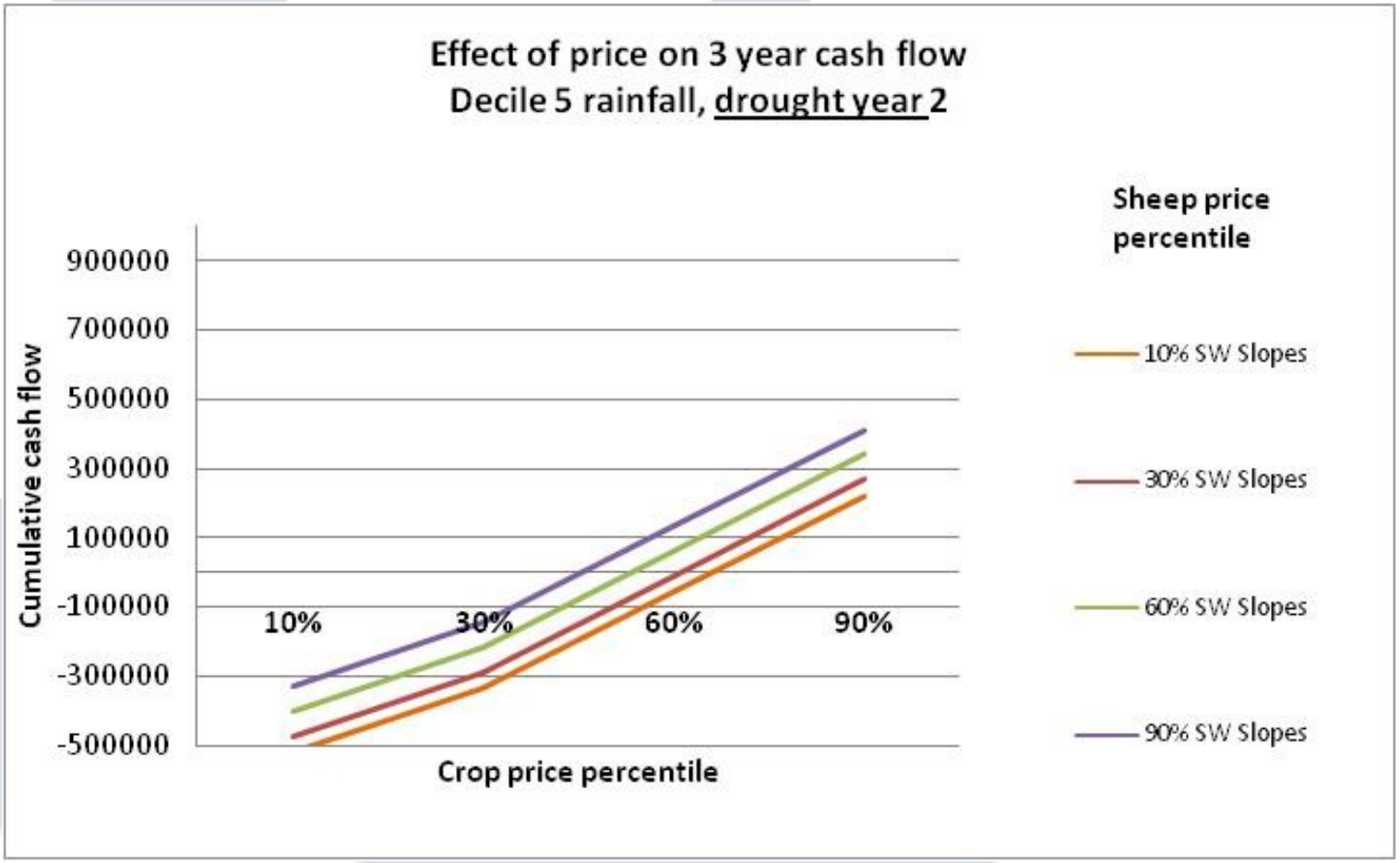
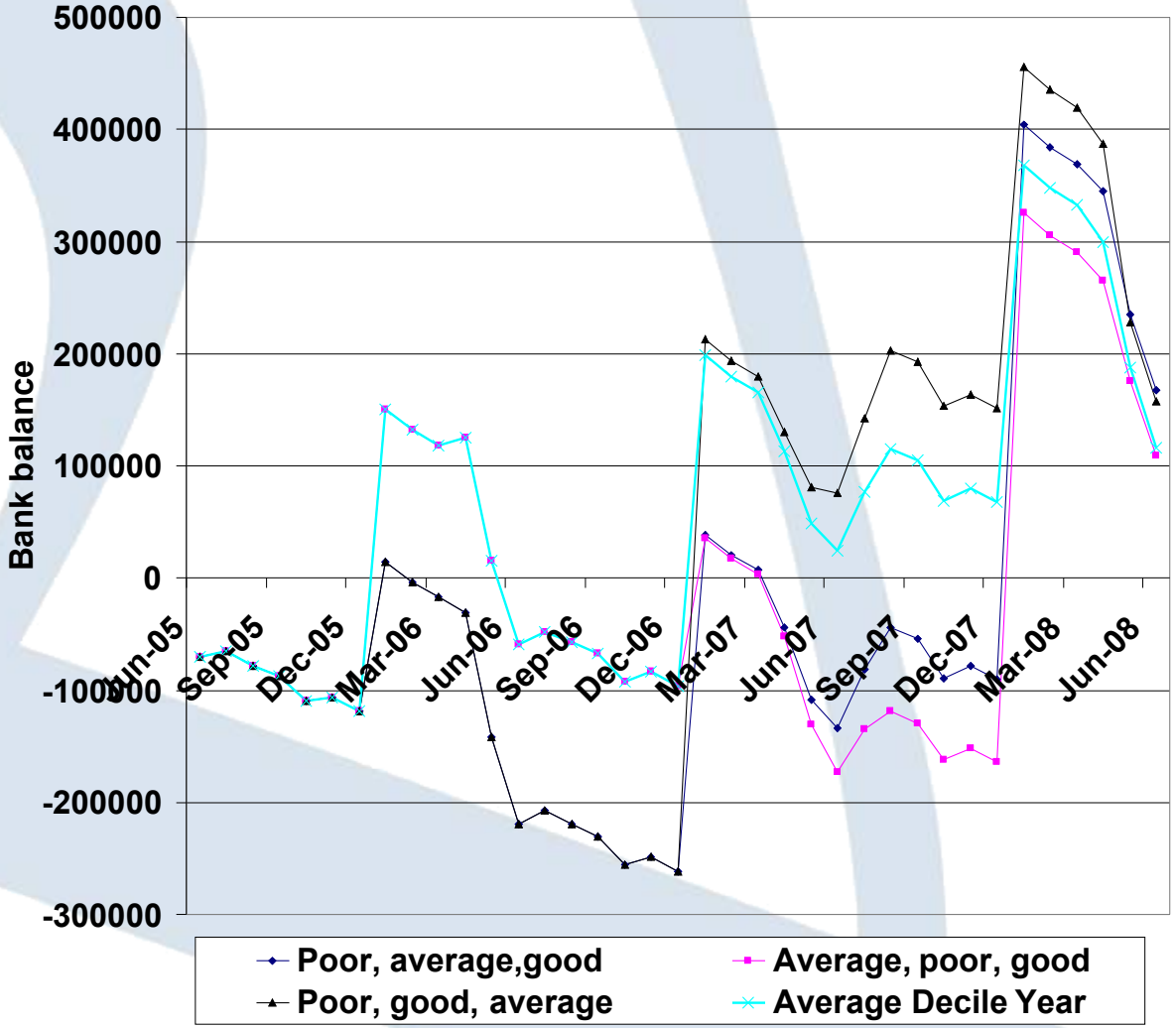
		10%	30%	60%	90%	
Sheep price Percentile	$/head	Equivalent wheat price $/tonne				
		$140	$191	$268	$344	
10%	$30	-520,819	-335,552	-57,651	220,250	$741,069
30%	$45	-473,065	-287,798	-9,897	268,004	$741,069
60%	$68	-401,434	-216,166	61,734	339,635	$741,069
90%	$90	-329,802	-144,535	133,366	411,267	$741,069
Gain 90%-10%		191,017	191,017	191,017	191,017	

What about price?



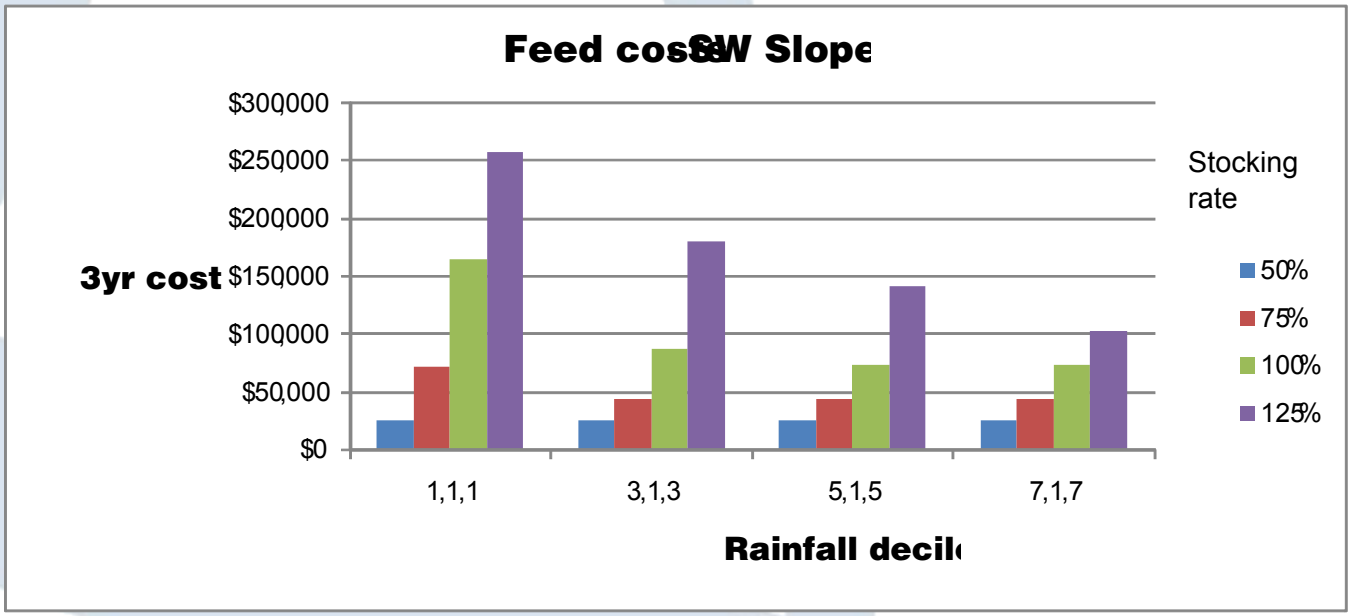
Timing is important



Drought feed costs

Effect of stocking rate on drought feed costs

Stocking intensity % potential	Seasonal deciles	1,1,1	3,1,3	5,1,5	7,1,7
	50%	$25,917	$25,917	$25,917	$25,917
	75%	$72,109	$45,376	$45,376	$45,376
	100%	$165,138	$88,067	$74,164	$74,164
	125%	$258,168	$181,096	$141,555	$102,951



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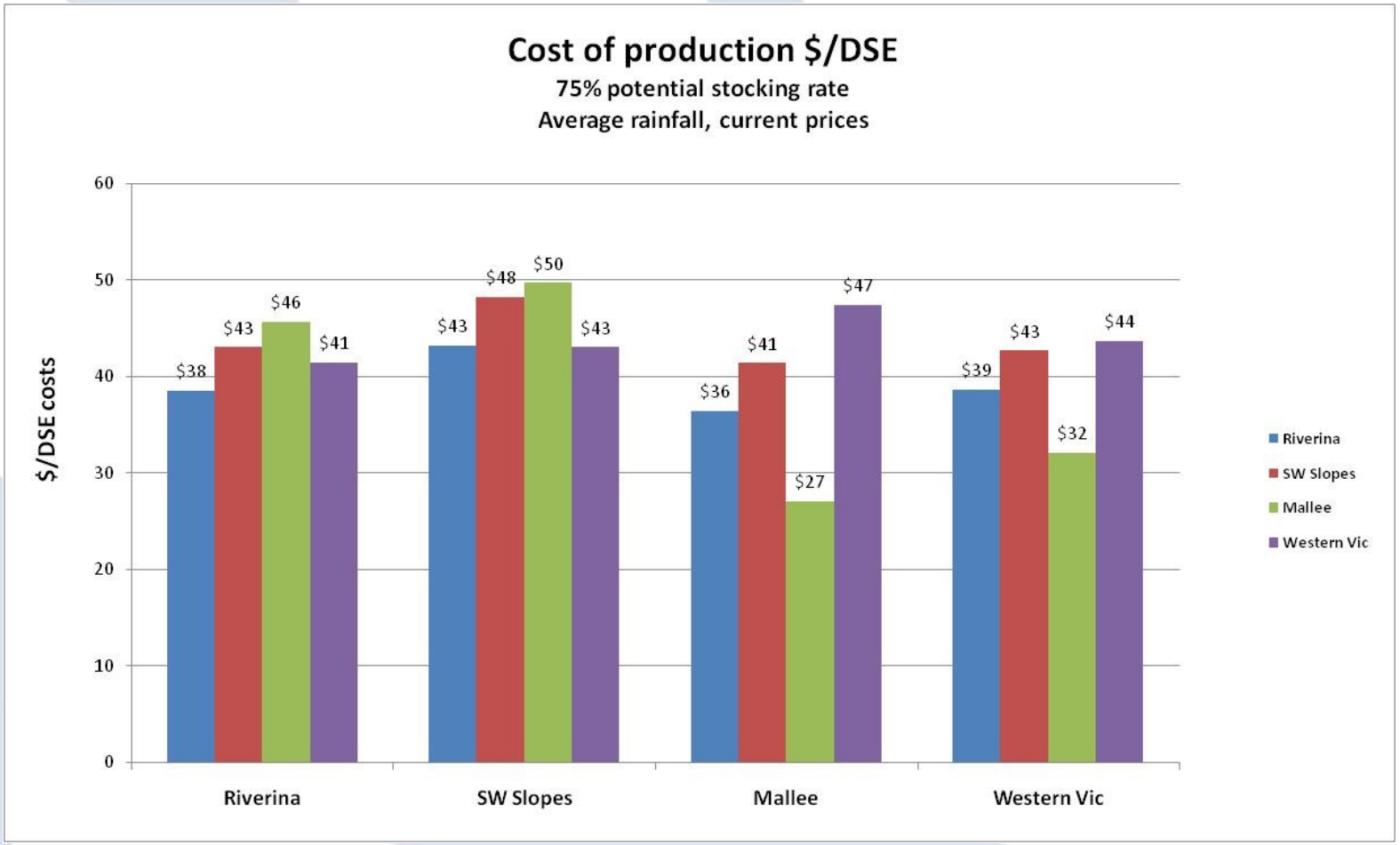
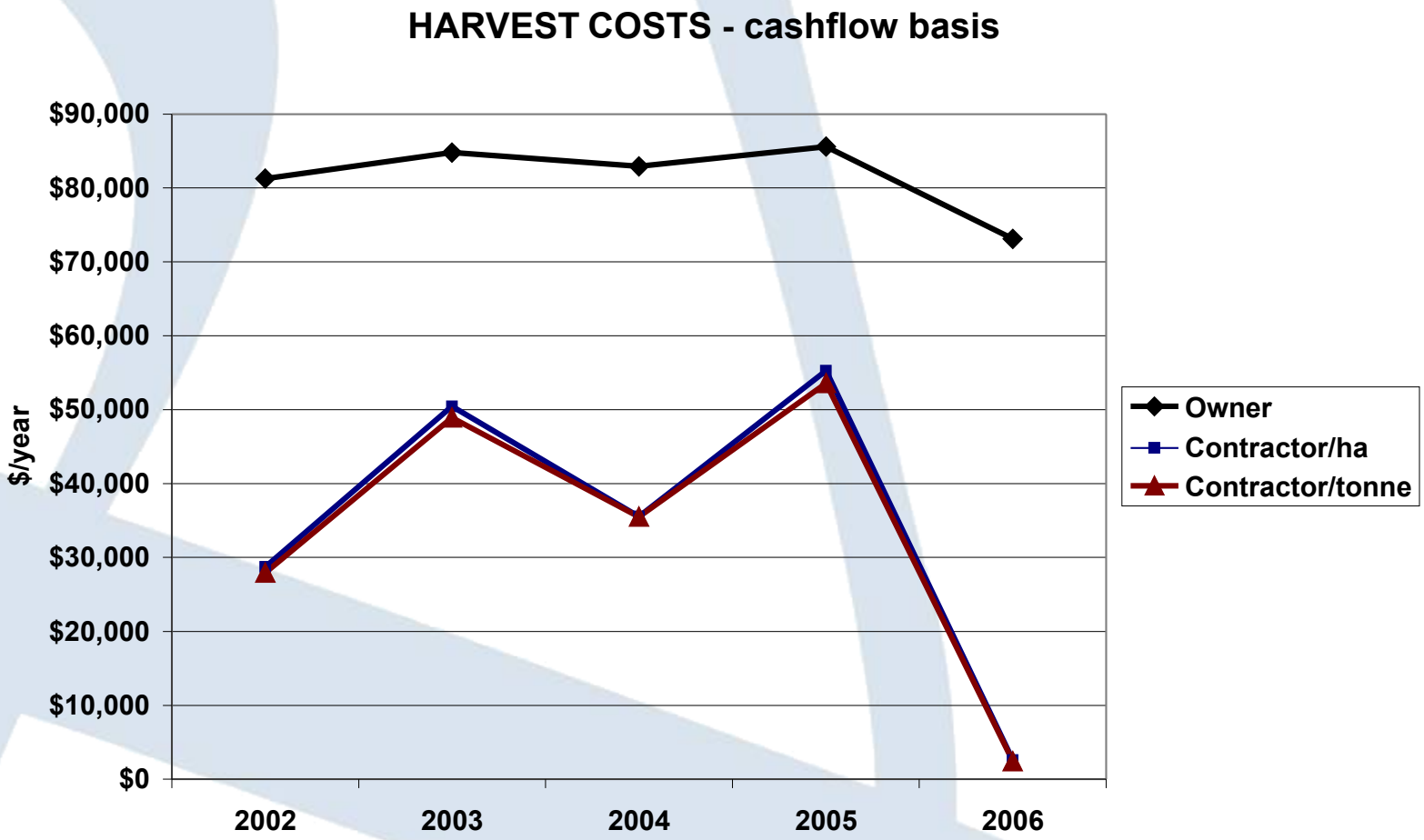


HARVEST COSTS
5 yr cashflow



HARVEST COSTS
5 year Cashflow

HARVEST COSTS	*Total/Av*
Ha	*644*
Yield t/ha	*2.68*
Owner	*$407,703*
Contractor/ha	*$172,578*
Contractor/tonne	*$168,357*
Header value	*-$105,159*

Enterprise costs