



THE IMPORTANCE OF BEEF COWS

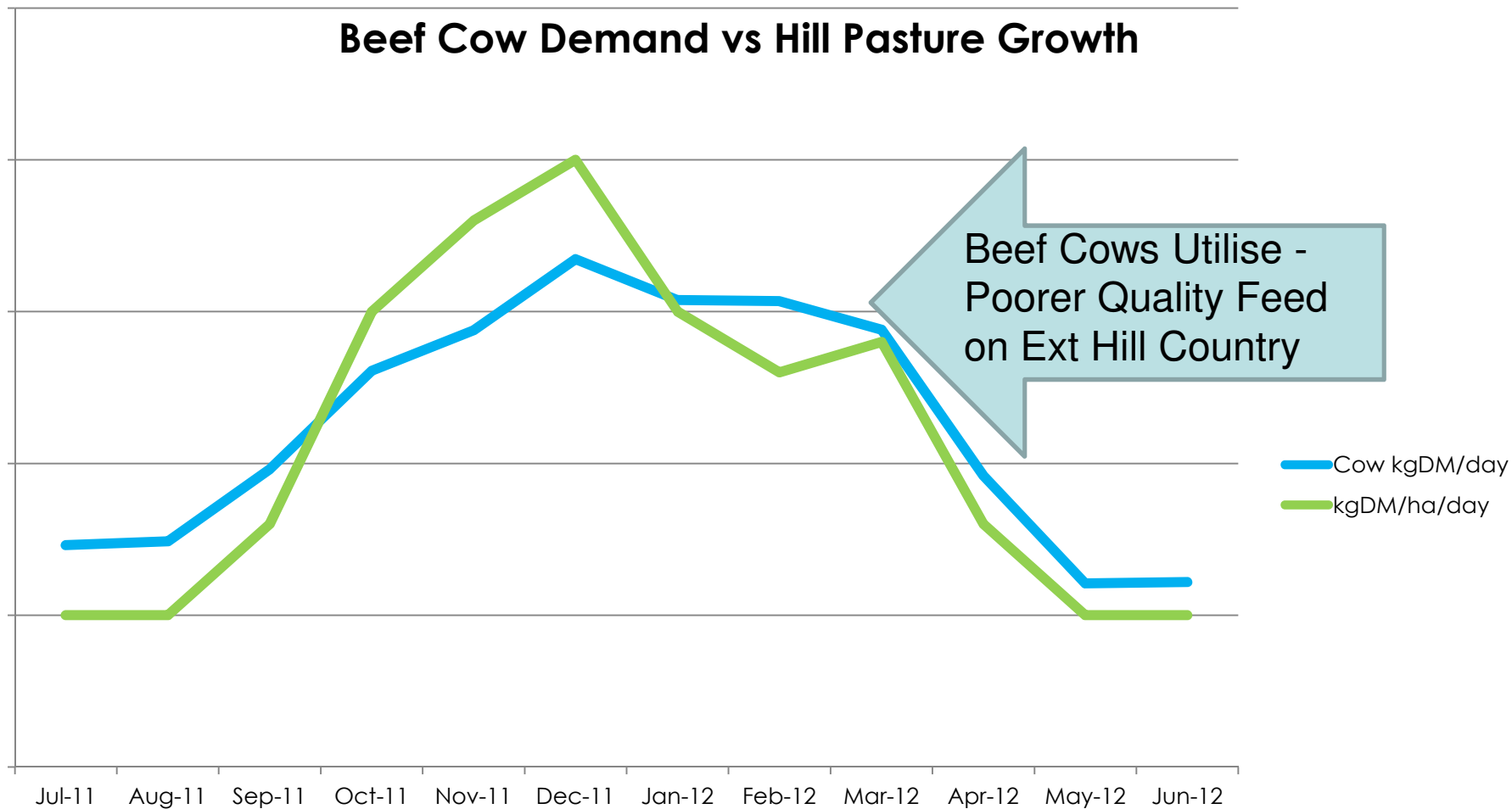
MENDIP HILLS STATION

April 2014

Nicky Hyslop

- Importance of Beef Cow
- **Beef Profit Partnership** Project
 - Who, Why & What
 - Key Projects
 - Elastic Cow
 - Early Weaning
 - Take Home Messages

Importance of Beef Cow



Importance of Beef Cow



Gross Margin (not including labour)	Br Ewe 120% Selling Stores	Br Cow 85% Selling Weaners
\$/SU	\$69	\$58
c/kgDM	11c	9c
c/MJME	1.1c	1.0c

- **Above does not allow for the ability of breeding cows to “groom” pastures in the autumn for ewes for tupping or lambs or cattle for finishing.**
- Grooming pastures may convert pasture quality from 10 to 11MJME/kgDM.
- An improvement of 1 MJME/kgDM for breeding ewes for 30 days pre tup will enable a 60kg ewe to put on 1kgLW. This should result in 5% lift in lambing % or +1.5c/kgDM Sheep Gross Margin – should this be shared with the breeding cow??
- The complimentary affect of the breeding cow is so often over looked when we sit down and review our financials at the end of the year. Be careful when just looking at Gross Income or Gross Margins for breeding cows – they don’t tell the whole story!!

- While we can be confident that the breeding cow gives some of her benefits to other stock classes we **MUST STILL FOCUS ON LIFTING OUR BEEF PRODUCTIVITY.**
- **A 5% LIFT IN CALVING % = + \$4/SU OR 1.5c/kgDM in any one year.**
Subsequent on going lifts in productivity through greater selection pressure on range of traits (eg. Weaner liveweights).

Beef Profit Partnership (BPP):



- 10 beef breeding finishing beef farmers within Canterbury Foothills
- All farmers required to record base information & additional information relative to individual targets over 3yrs.
- Meet two monthly both on & off farm.
- **Target 5% gain/yr or 15%/3yrs in productivity/financial**

BPP: Topics Covered



- **Use of EID Technology**
- **Beef Nutrition & Feeding Systems** Agricom
Glenn Judson & Alastair Morehead
- **Parasite Management** Greg Mirams, Techion Group
- **Beef Cow Reproduction** Alastair Nicol, Advisor
- **Trace Elements** FTT Trace Element Trial & Local Vets
- **Yard Weaning** BPP Gisborne
- **Beef Genetics** Jason Archer, AgResearch
Jamie Gordan, ANZCO
- **Grain Feeding**
- **Elastic vs Resilient Cows**
- **Early Weaning**
- **Fodder Beet Systems**

CONTINUOUS IMPROVEMENT!

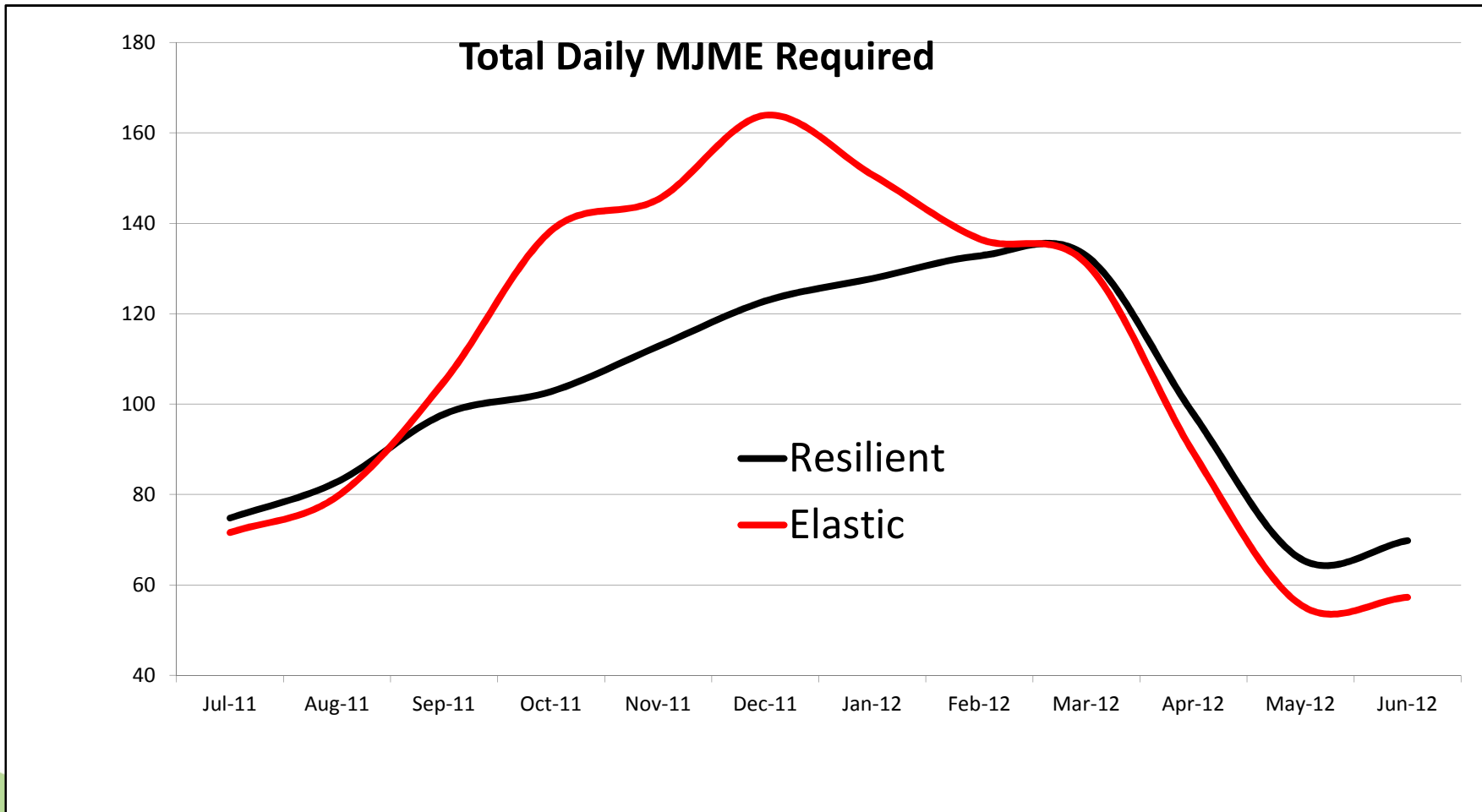
- Benchmarking current performance
- Setting Targets
- Monitoring
 - 15% OVER 3 YEARS
- “BLUE SKY” MANAGEMENT/TECH ??
 - Must have basics in place
 - Limited in hard hill/high country environ.

Elastic vs Resilient Cow Project

beef+lamb
new zealand

- Cow “**Resilience**” or “**Elasticity**” is the cows ability to maintain constant LW & intakes on range of feed quality & quantity offered.
- The “**Elastic**” Cow feed demand fits the NZ hill and high country feed supply profile BUT she will eat approx 10% more feed over the year.

Elastic vs Resilient Cow



Elastic vs Resilient Cow



ELASTIC COW PROJECT:	Base
Winter Feed \$/Summer Feed \$ Ratio	6
Av Cost of Feed Elastic Cow	\$11.63
Av Cost of Feed Resilient Cow	\$12.58
Elastic Cow Net Margin \$	\$13,038
Resilient Cow Net Margin \$	\$12,268
Difference	\$770
Difference / Cow / Yr	\$4.8

Elastic vs Resilient Cow



Nicol 1979:

Pre-Calving				
Pasture Allowance	20 kgDM/hd/day		8 kgDM/hd/day	
Liveweight(kg)	430		390	
Condition Score	4.5		3.0	
Post Calving	20 kgDM/hd	8 kgDM/hd	20 kgDM/hd	8 kgDM/hd
CS Joining	6.3	3.0	5.5	2.5
PPA (days)	72	79	68	97
% Pregnant	100	90	100	70
Weaning				
Calf (kg)	158	156	164	150
Cow (kg)	520	430	520	430

Elastic vs Resilient Cow



Other Sensitivity:	Base: KPIs The Same	Av Weaning kgLW/hd	Calving %
Elastic Cow	250	260	80.00%
Resilient Cow	250	250	85.00%
Elastic Cow Net Margin \$	\$13,038	\$16,039	\$13,038
Resilient Cow Net Margin \$	\$12,268	\$12,268	\$17,148
Difference	\$770	\$3,772	-\$4,110
Difference / Cow / Yr	\$4.8	\$23.6	-\$25.7

Elastic vs Resilient Cow Project

beef+lamb
new zealand

CONCLUSIONS – ‘Take Home’ messages?

- Single most important factor determining **beef cow productivity is cow condition at mating.**
 - Influences cow reproductive rate and condition score increase from calving to mating can also positively influence calf weaning weights.
 - Need to look at **calving dates or saving feed** to calve onto to ensure good feed offered to cows from calving to mating.
- **“Elastic” Cow can utilize late spring/summer feed surpluses** and increase bodyweight, while in winter can withstand some bodyweight loss **-the ultimate hill country “hay baler”.**
- **The “Elastic” cow is more economic** providing that:
 - **Winter feed is 6x more expensive** than late spring/summer feed surpluses.
 - **Reproductive rates** are equal to that of the “Resilient” cow.

The logo for Beef + Lamb New Zealand is contained within a white oval with a subtle drop shadow. The text 'beef+lamb' is written in a lowercase, green, sans-serif font, with a plus sign between the words. Below this, 'new zealand' is written in a smaller, lowercase, green, sans-serif font.

beef+lamb
new zealand

BPP Canterbury

Early Weaning

Redcliffs Station

Mark Everest & Willy Ensor

Early Weaning: Redcliffs Station



	Current	Early Weaning	Comment
Cow numbers	160	160	
MA Calving %	86%	86%	
R2 Calving %	74%	74%	
Calving Date	25-Sep	25-Sep	
Weaning Date	30-Apr	20th Feb	70 days earlier
Weaning Wt (kgLW)	195kgLW	180kgLW	Marked
Post Wean Forage	Pasture/Rape	Fodder Beet, Silage, Straw	calves @ ~125 days at 180kgLW

Early Weaning: Redcliffs Station



Weaner Steer LW:

Current Wean

Date	Start Live Wt. kg	Body Wt. Gain kg/d	End Live Wt. kg
Jul 12			
Aug 12			
Sep 12			
Oct 12			
Nov 12			
Dec 12			
Jan 13			
Feb 13			
Mar 13			
Apr 13		0.2	198
May 13	198	0.4	211
Jun 13	211	0.5	226

Early Wean

Date	Start Live Wt. kg	Body Wt. Gain kg/d	End Live Wt. kg
Jul 12			
Aug 12			
Sep 12			
Oct 12			
Nov 12			
Dec 12			
Jan 13			
Feb 13		0.2	187
Mar 13	187	0.7	208
Apr 13	208	0.9	235
May 13	235	0.8	261
Jun 13	261	0.6	279

Early Weaning: Advantages



- More live weight pre winter (+50kgLW on 31 May)
- Average sale date:
Steers 30 Mar → 10 Dec (- 110d)
Heifers 16 Apr → 30 Dec (-106d)
- Average sale weight:
Steers 433 → 480kgLW (+47kgLW)
Heifers 381 → 406 kgLW (+25kgLW)
- Improved average cover.

Early Weaning: Disadvantages

- Reliant on high yield (22TDM) & high cost crop (Jim Gibb debates).
- Feeding out for additional 3 months.
- More supplement required (price risk)
- More labour?
- Start grazing Fbeet at 150 days (maturity 220 days) – lost yield potent.

Early Weaning: Direct Financials



FARMAX YOUR ADVANTAGE			Compare Gross Margin Jul 12 - Jun 13		
			Current	Early Wean	Difference
Revenue	Sheep	Sales - Purchases	158,715	158,712	-3
		Wool	203,315	203,315	0
		Capital Value Change	1,500	1,500	0
		Total Sheep	363,530	363,527	-3
	Beef	Sales - Purchases	145,143	174,186	29,044
		Total Beef	145,143	174,186	29,044
	Crop & Feed	Capital Value Change	0	-3,544	-3,544
Total Feed		0	-3,544	-3,544	
Total Revenue			508,673	534,170	25,497
Expenses	Crop & Feed	Conservation	39,920	39,920	0
		Forage Crops	22,800	36,150	13,350
		Regrassing	18,000	10,800	-7,200
		Nitrogen	10,475	10,475	0
		Total Crop & Feed	91,195	97,345	6,150
	Stock Costs	Animal Health	22,073	21,963	-110
		Shearing	18,474	18,474	0
		Total Stock Costs	40,547	40,437	-110
Interest on Capital (livestock & feed)			46,953	45,728	-1,225
Total Variable Expenses			178,695	183,511	4,816
Gross Margin			329,977	350,659	20,681
Gross Margin per ha			261	278	16

Early Wean: SUMMARY




- **Direct Beef benefit of \$20,000.**
- Must get the growth rates predicted.
- Dryland beet must do average 22tDM/ha.
- Reduces summer feed risk.
- Increased cropping costs and more.
- More late summer labour required.



BPP Canterbury

GROUP DATA & PERFORMANCE
TRENDS

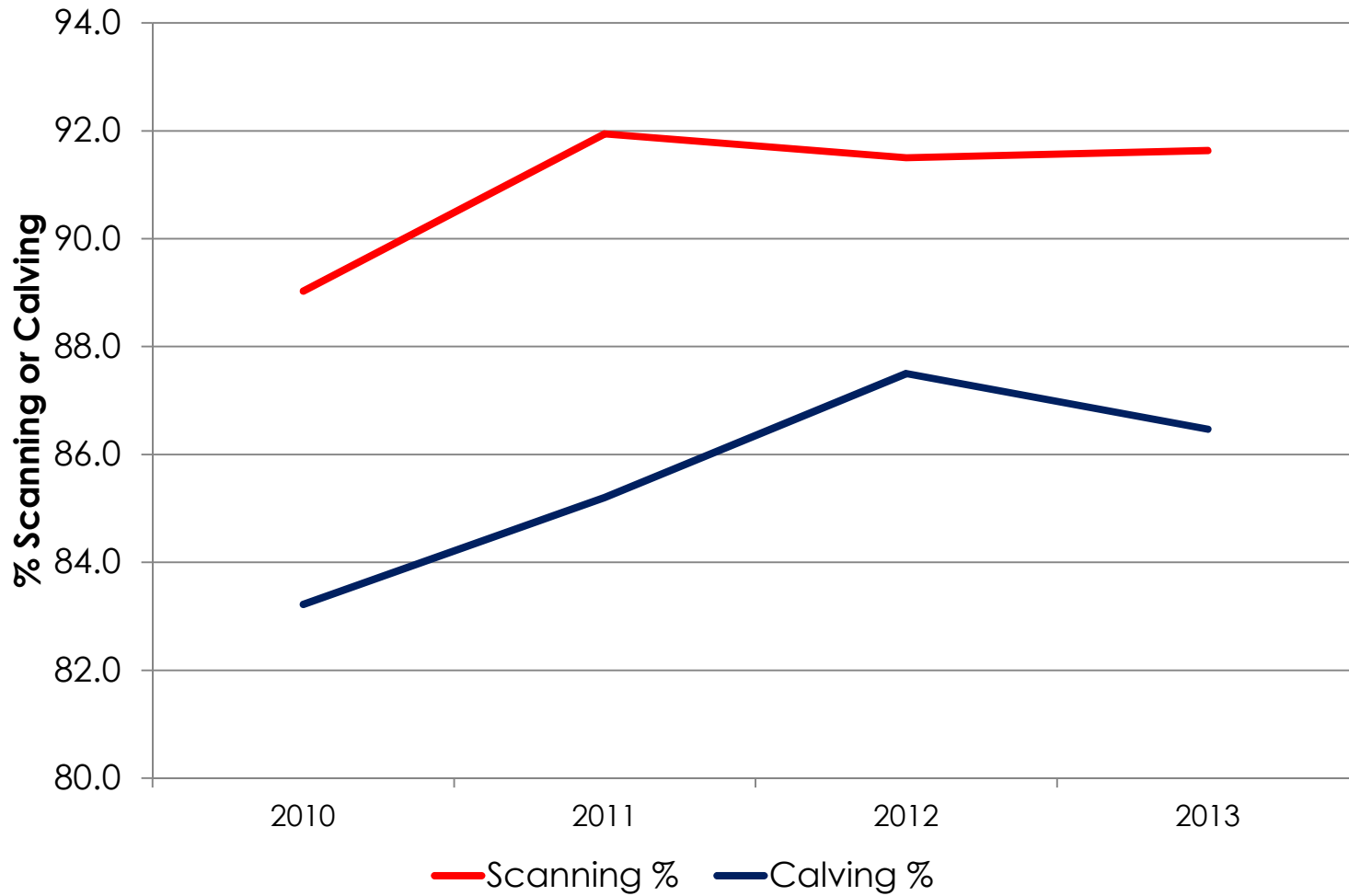
Key driver of beef cow profitability:

- Calves weaned/cows mated
 - **Kg calf weight weaned/cows mated**
 - **Post- wean LWG's** in shoulder seasons.
 - The most profitable herd is one that weans a **high number of heavy calves, using the cheapest feed on the farm.**
- 
- A thick, light green curved line that starts on the left side of the slide and curves downwards and to the right, ending near the bottom center.

BPP Reproduction:



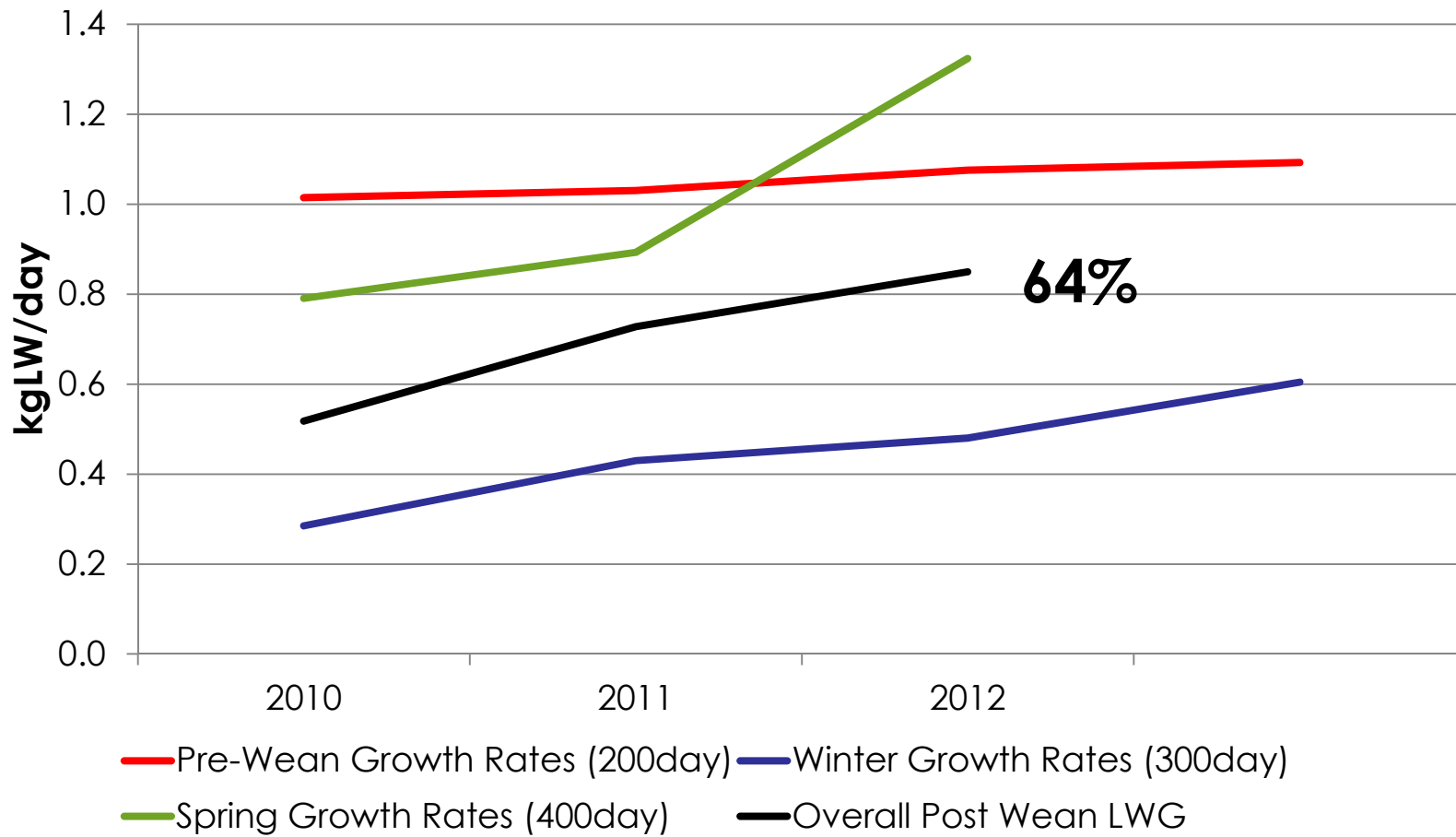
BPP Reproductive Benchmarks



BPP Growth Rates:



BPP Beef Growth Rates (kg/day)



Post Wean Growth Rates



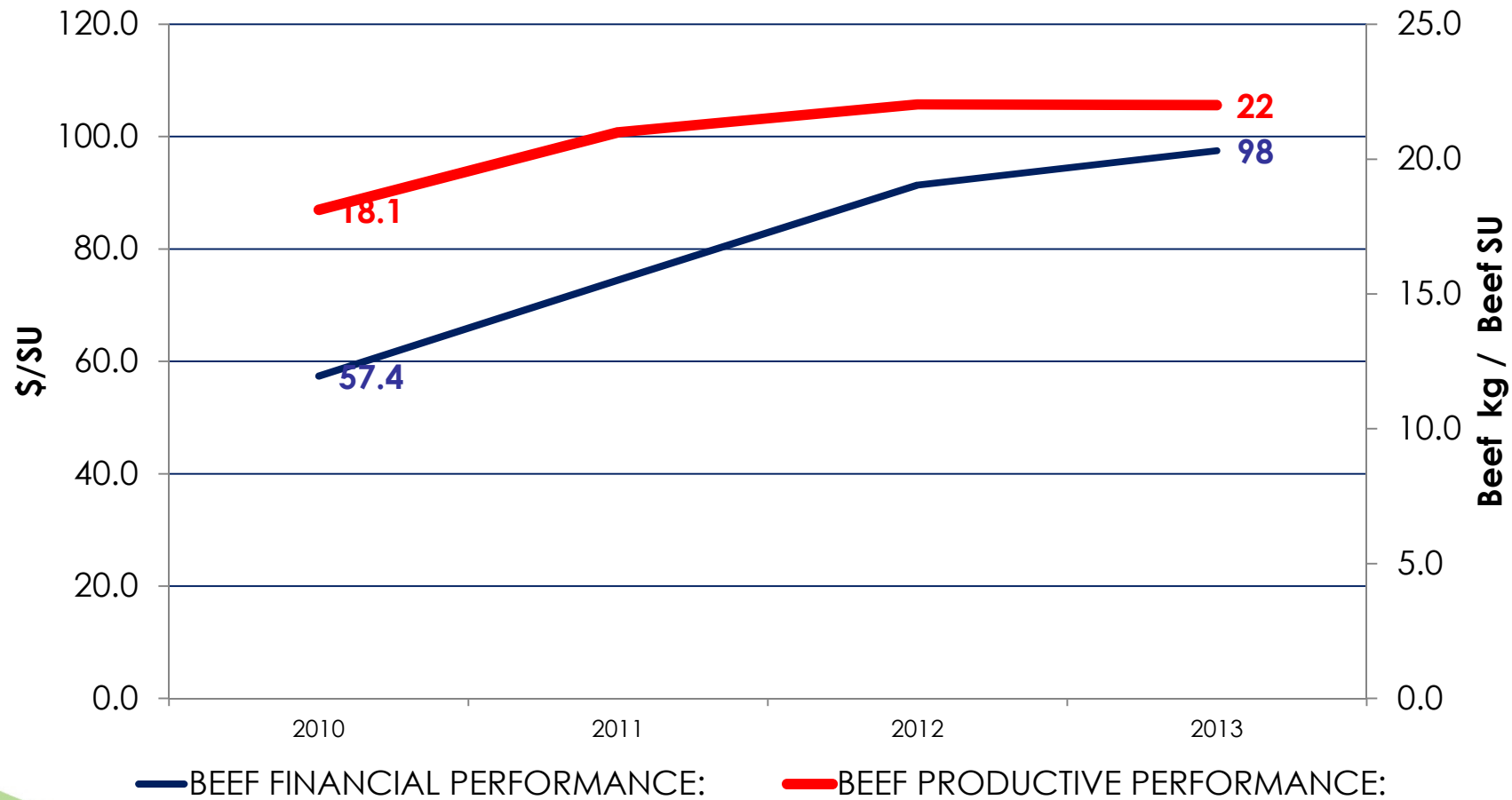
Base Assumptions:			\$/kgLW	
Weaning Wt	234kgLW @		\$2.6	15 April
Finish Wt	420kgLW @		\$2.4	11 Feb
Death Rate		2.00%		
Return:	\$0.14/kgDM			

FINISH EARLIER:				
% Incr in LWG/day	0%	5%	15%	30%
Av LWG kg/day	0.62	0.65	0.71	0.80
Av kgLW Finish	420	420	420	420
Av Kill Date	11-Feb	27-Jan	2-Jan	4-Dec
\$/kgLW	\$2.40	\$2.50	\$2.60	\$2.70
Av \$/kgDM	\$0.14	\$0.16	\$0.20	\$0.24

BPP Productive & Financial Trends



BPP Key Performance Indices



BPP Financial Trends



BEEF FINANCIAL PERFORMANCE:		2010	2011	2012	2013	Total Yrs Increase
\$/SU	Annavale		68	78		14.7%
	Bluecliffs	79.0	86.0	113.0	106	34.2%
	Brockworth		66.0	87.0	89	31.8%
	Cleardale	56.6	85.40	133.6		136.0%
	Coleridge					
	Downs	53.4	78.7	92.3		72.8%
	Mt Peel	56.0	80.0	90.7		62.0%
	Quartz Hill	65.6	77.5	76.6		16.8%
	Redcliffs	55.7	72.2	82.3		14.0%
	Wakare	35.2	56.7	68.7		95.2%
Overall	Financial	57.4	74.5	91.4	98	53.1%
				BPP Target		15%

BPP Productive Trends



BEEF PRODUCTIVE PERFORMANCE:

KG/SU WINTERED	2010	2011	2012	2013	Total Yrs Increase
Annavale		14.7	14.8		
Bluecliffs	19.6	24.0	27.0	24	22.4%
Brockworth		20.0	23.0	20	0.0%
Cleardale	16.8	37.1	30.5		81.5%
Coleridge Downs	19.2	21.9	22.5		17.2%
Mt Peel	21.4	21.0	22.0		2.8%
Quartz Hill	19.6	19.5	20.3		3.6%
Redcliffs	17.8	15.2	21.2		39.5%
Wakare	12.4	15.6	17.0		37.1%
Av Group	18.1	21.0	22.0	22	25.5%
			BPP Target		15%

- Overall **achieved target of 15%/3 years**
- Big variation within properties & plenty of room to improve.
- No **SILVER BULLET** but attention to genetics, feeding, animal health and timing of management.
- Starts with measuring, targets & monitoring. Doesn't end but does motivate change & focus on \$\$\$.

Beef Profit Partnership Challenges

beef+lamb
new zealand

- **Hard to capture all of the gain of breeding cow / beef enterprise with beef productivity alone.**
- Cows often used to “groom” pastures for other stock benefits and often first to be “tightened up”.
- Long time between monitoring. Eg. Reproductive targets etc.

- **Two Key Areas with no Excuses:**
 - **Look after our cows from calving to mating.**
 - Calving date
 - Separate lighter cows & preferentially feed.
 - **Maximise post-wean growth rates in the shoulder of the season (feed is cheapest).**
- Moving forward other areas of interest
 - **Fodder beet systems & beef economics**