

Based on paper P12018, P12025

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- Global Drivers
- Land Use Change
- Market Prices Drive Business
- On Farm Productivity and Profitability
- Aerial Topdressing Analysis
- Summary

#### **6 Global Drivers to Note**



1. Population Growth 1960 <u>3</u> billion; 2012 <u>7</u> billion

2. Expanding Middle Class, China, India, South Asia,

Russia

3. Energy Prices up 3.5 x's in 6 years now building

into food value chain

4. Fertiliser Prices up 2000-2004 \$300/tonne on

ground now \$600/tonne builds into food value chain

5. Water management and population pressure

6. Food to become an increasing share of disposable income?

#### **Current Debt Turmoil**



- 1. Europe and UK in recession
- 2. Grexit if can't demonstrate €14.5 billion govt cut next €31.2 billion loan at risk
- 3. Spain a big risk highly indebted regions
- 4. US slow growth but +2%

Post November Election winner gets a "fiscal cliff" \$400 billion tax increase \$100 billion cut in spending + huge government deficit \$16 trillion

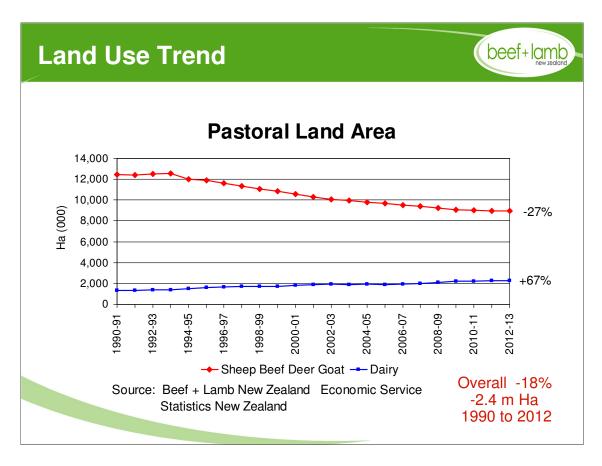
5. Growth slowing but ....

China +7.6%; India +5.3%

Egypt, Saudi Arabia +5% and + 7%



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Overall, the dairy herd expansion was approximately matched by pastoral land switched from sheep and beef production to dairy. At 2012-13 dairy pastoral land totals an estimated 2.26 million hectares compared to 1.35 million in 1990-91.

The sheep and beef farm land decrease is more difficult to explain. The 27 per cent decrease amounts to 3.31 million hectares loss of sheep, beef and deer pastoral land since 1990-91 to an estimated 9.15 million hectares at 2012-13. Of this 907,000 hectares of prime sheep and beef land was switched to dairy production leaving a 2.6 million hectare loss to other land uses.

This latter land use change would be spread amongst blanket forestry, extensive marginal pasturelands closed for conservation, marginal land reverting to scrub and bush, urban encroachment especially from smallholding lifestyle blocks near towns and cities around Auckland, Hamilton and Christchurch, viticulture and horticulture.

**UPDATE** 

**ANNUAL** 

Doc#140557 ES Master Presentation Slides Land Use.xls, P12032 3 August 201, RMD

DATA AVAILABLE

May – final

SOURCE

Stats NZ Ag Stock numbers

**UPDATER: RG/AHW** 

# Key Land Use Changes (commercial farms, excludes lifestyle blocks)



No. Hill Country Farms	7,500	<b>2011-12e</b> 6,245 6,240	-17%
No. Finishing Breeding Farms	12,100		-48%
Hill Country Farms eff. m ha.	6.81	5.93	-13%
Finishing Breed Farms m ha.	3.27	2.39	-27%
Dairy Farms	14,685	11,800	-20%
Dairy m ha.	1.35	2.24	+66%

Source: Beef + Lamb New Zealand Sheep & Beef Farm Survey Statistics New Zealand

The key land use change is the loss of prime sheep and beef finishing breeding country to dairy. There has also been loss of prime country to horticulture, life-style blocks and urban encroachment.

The above does not include land allocated to deer farming.

Updated 3 August 2012, RMD P12032.xls

#### Farm No's and Size



	1984-85	2011-12e	
Commercial S&B Farms	22,000	12,490	-43%
Av Stock Units	3,424	4,060	+19%
No of Dairy Herds Av Cows at peak	15,881 144	11,800 393	-26% +173%
Commercial Horticulture		7,000	

Source: Beef + Lamb New Zealand Economic Service Livestock Improvement Corporation, Horticulture NZ

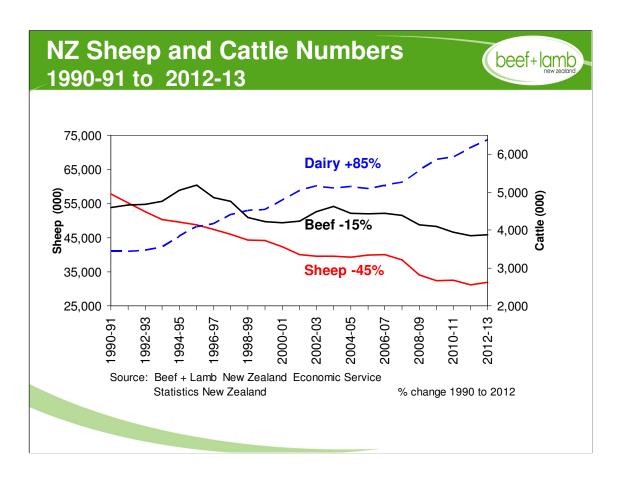
Since deregulation in 1984-85, the number of commercial sheep and beef farms and dairy farms has declined. Commercial sheep and beef farms, and dairy farms in this context refer to farm businesses that provide the predominant farm family income.

The number of commercial sheep and beef farms has declined 43 per cent from 1984-85 to 2011-12 from both land use change and amalgamation. The change in land use includes farms converted to dairy production, blanket forestry and the expansion of the viticulture industry particularly in the Hawks Bay, Wairarapa, Marlborough and North Canterbury. Near cities the conversion of farms into small lifestyle blocks has also added to the reduction in commercial farms. While the number of sheep and beef farms has declined from 1984-85 to 2011-12, farms have become 15 per cent larger through the loss of smaller farms to other land uses and amalgamation. Even then this is understated due to recent droughts and temporary destocking of farms.

While dairy farms from 1984-85 to 2011-12 have declined 26 per cent but the new "start up" dairy farms mask the fact that smaller dairy farms have amalgamated into larger farms or changed land use. i.e., 40 per cent of dairy farms in existence in 1984-85 were not in existence in 2008-09.

Dairy herd sizes have increased 173 per cent over this period to average 393 cows per herd in 2011-12.

Updated 3 AUG 2012, RMD P12003.xIS



1990-91 is used as a base as all of the residual effects of subsidies were removed in November 1985 or were put on a fast track to removal by then. The NZ Agricultural Sector from that point has been totally driven by global market price trends.

Doc#140557 ES Master Presentation Slides P11018 Stock Nos.xls 1 Aug 2012 RMD

DATA	AVAILABLE	
May -	final	

June - provisional July/Aug - forecast

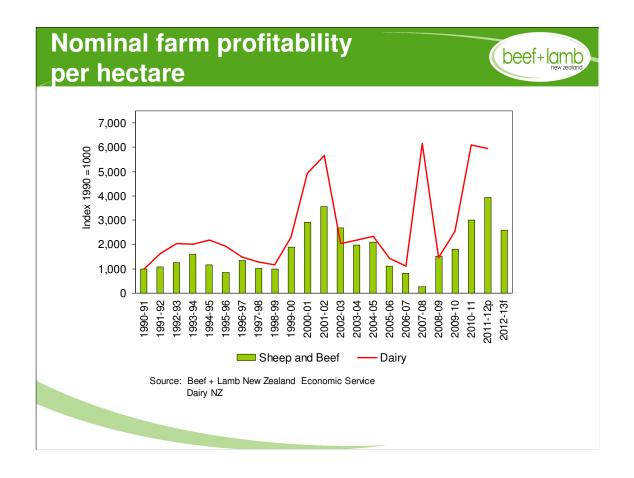
#### **SOURCE**

Stats NZ Ag Stock numbers Stock number survey Reconciliations

#### **UPDATE**

ANNUAL - May ANNUAL - June ANNUAL -

**UPDATER: RG/AHW** 

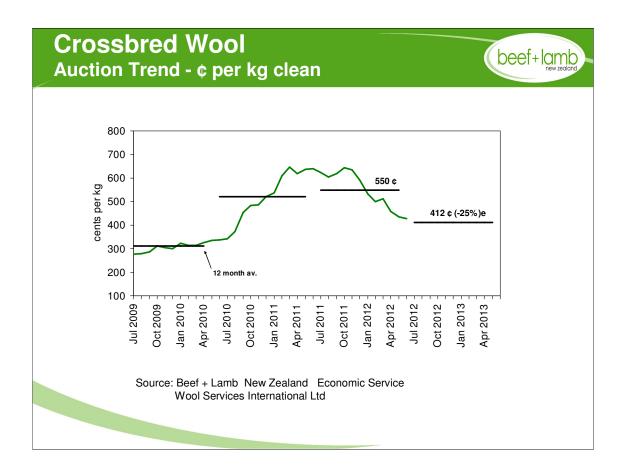


UPDATED: 10 July 2012 EGM

SOURCE: P11017.xls



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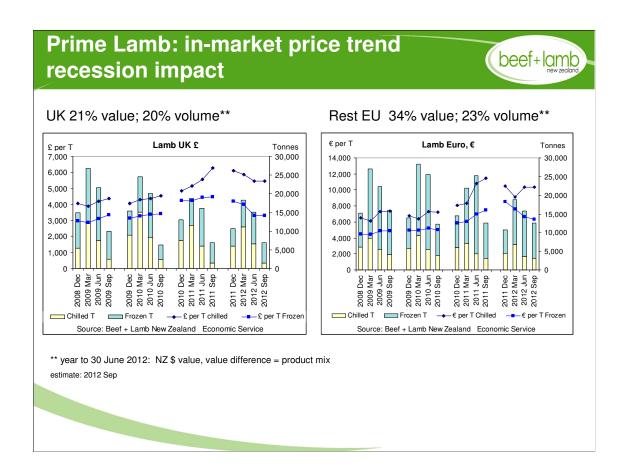
Wool prices were at a 100 year low inflation adjusted terms in 2009-10.

Crossbred wool, the majority of the NZ clip is used in interior textiles with a big usage in carpets.

With the European recession there are few new building starts and building refurbishment is largely deferred which equates to reduced demand for carpet and interior textile products.

RMD 4 Aug 2012

Ref: Schd\_FOB\New Wool SCH\_FOB.xls [Weighted Data]



The above shows for 2011-12 to impact of the Debt crisis and flow to recession in the U.K. and EU on confidence reflected in lamb demand. Note the trend here is equivalent to the UK and Rest of EU import price per tonne for lamb in UK Pounds and Euro currencies respectively.

These are reflected in wholesale prices. In this situation the retail prices may ease slightly but the spread between wholesale price and retail widens.

Updated 3 Aug 2012, RMD ref: SchedulesFOB[lamb Qtr].xls

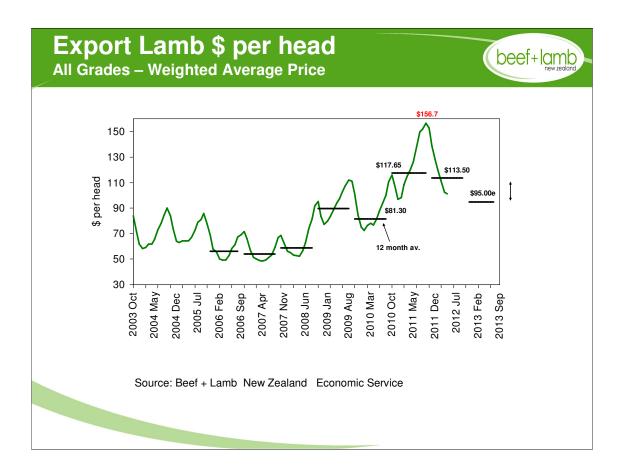
Rank	2000-01	2005-06	2010-11	2011-12	2011-12 \$ million
1	UK	UK	UK	UK	486,10
2	Germany	Germany	USA	USA	247,41
3	USA	USA	France	Germany	229,65
4	France	France	Germany	China	218,77
5	Belgium	Belgium	Belgium	France	160,47
6	Canada	Japan	China	Netherlands	148,63
7	Saudi Arabia	Canada	Netherlands	Belgium	116,54
8	Italy	Italy	Canada	Canada	96,25
9	Japan	Netherlands	Saudi Arabia	Saudi Arabia	82,99
10	Mexico	China	Japan	Jordan	57,61
11	Switzerland	Saudi Arabia	Switzerland	Japan	48,15
12	Greece	Mexico	Jordan	Switzerland	40,69
13	China	Switzerland	Spain	Hong Kong	32,94
14	Denmark	Greece	Italy	Italy	32,60
15	Netherlands	Spain	Greece	Papua New Guinea	28,34
		•		Other	316,72
					\$2,343,93

The UK lamb market is the single largest country market by value and is split on a tonnage basis around 50 per cent high value chilled product and 50 per cent frozen product. The UK for 2011-12 accounted for 20 per of lamb exports by volume.

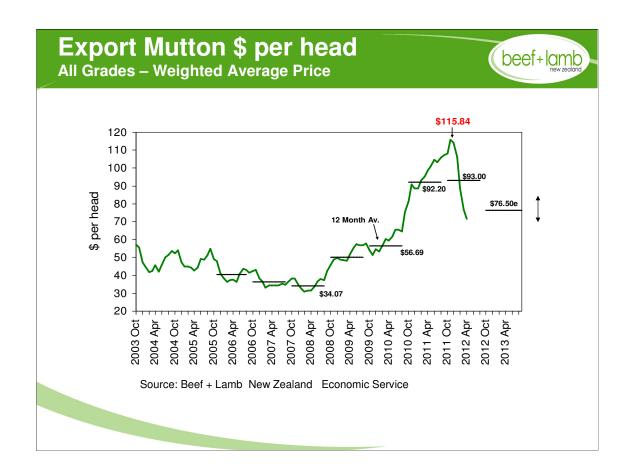
The US is focused on high value cuts such as lamb racks but accounts for 6 per cent of exports by volume but is the second most important market by value as shown above.

China in terms of importance by value has moved up from 13<sup>th</sup> place in 2000-01 to 4<sup>th</sup> in 2011-12. The Chinese market is a volume market taking value cuts that are largely used in hot pot type cooking. China is the second largest single country market by volume for lamb accounting for 19 per cent of the tonnage, just behind the UK's 20 per cent of lamb shipments.

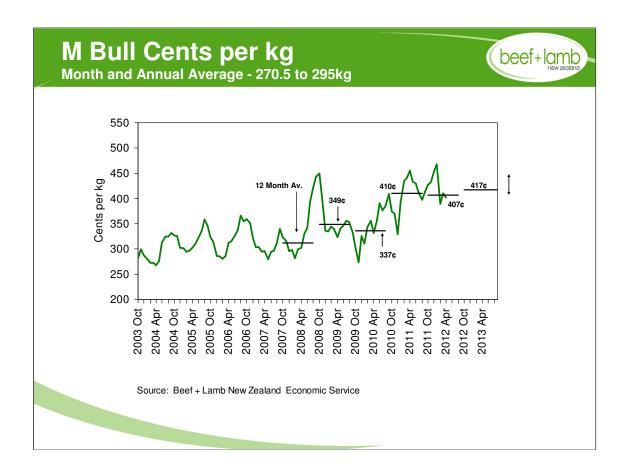
Updated 3 Aug 2012, RMD Extract from MW3564.xls



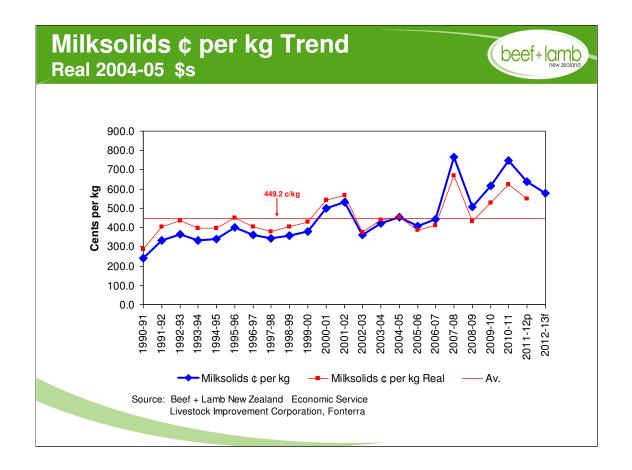
SOURCE: P12029, Lamb Prices.xls



SOURCE: Doc # 12029, Mutton Prices.xls



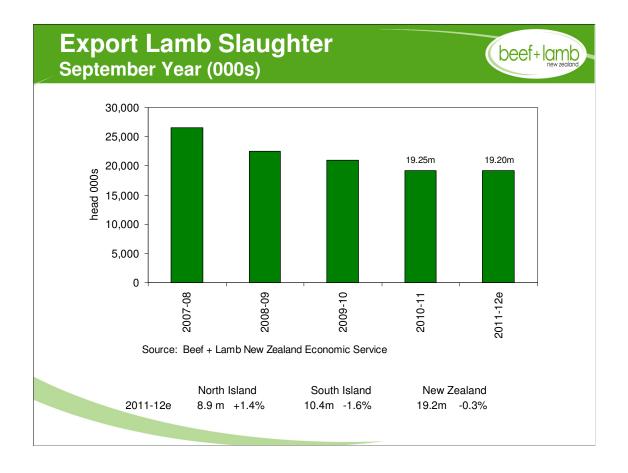
SOURCE: P12001, M Bull Prices.xls



SOURCE: P12029, Dairy Prices.xls

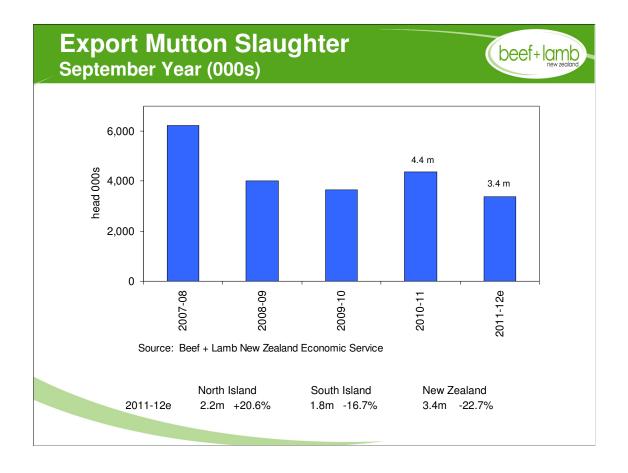


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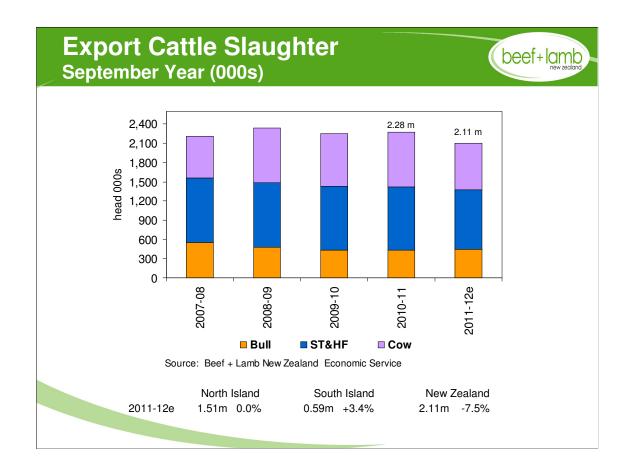
UPDATED: 10 July 2012 EGM

SOURCE: P12029.xls



UPDATED: 10 July 2012 EGM

SOURCE: P12029.xls



Updated 10 July 2012 EGM P12029.xls

Productivity Compar		beef+lamb new zealand	
	1990-91	2011-12e	
Lambing Percentage (ewe)	100.4	119.3	+19 lambs
Hogget lambs as % all lambs	-	3.9%	
Average Lamb Wt (kg)	14.35	18.60	+30%
Lamb sold kg/ewe	9.30	17.60	+89%
Wool Prodn kg/head	4.28	5.45	+3%
Average Steer Wt (kg)	297	314	+6%
Milksolids per cow (kg)	260	334	+29%

The large increase in lambing percentage and increase in average lamb carcase weights both reflect improved nutrition as well as genetic improvement.

Kilograms of lamb carcase weight sold per ewe wintered is another expression of the improved productivity of the ewe flock that combines the previous two measures.

Wool prodn per head reflects the improved nutrition of the flock and the trend for the predominant crossbred clip to move into stronger, higher micron, wool that is more suited to carpets and rugs.

The average steer weight increase shows the underlying improvement that the increased cull dairy cull cow slaughter component masks in the overall cattle weight trend shown in the next slide.

The milksolids per cow increase is remarkable in the context that both genetic and feed management improvement increased per cow production while the dairy herd expanded 72 per cent from 1990-91 to 2010-11.

Updated 26 June 2012, REG, 3 Aug 2012 RMD P12028 workbook, Tab "Productivity" Sheep Reconciliation Cattle Reconciliation LIC (Milksolids)

#### **NZ Total Production**



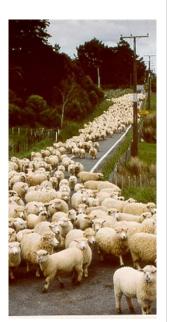
#### 1990-91 to 2011-12e

More Dairy +170%

More Beef and Veal +14%

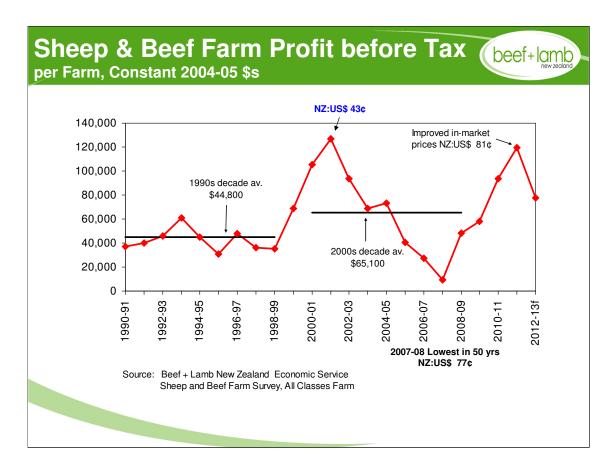
Less Lamb -9%

but from 46% fewer sheep!



- Lamb performance has come from increased animal performance especially from greatly improved lambing percentages and lamb slaughter weights since 1990-91.
- Dairy production and beef production also reflects the increased dairy herd size and increases in animal performance.

Updated 27 June 2012, REG Rec's P12003.xls

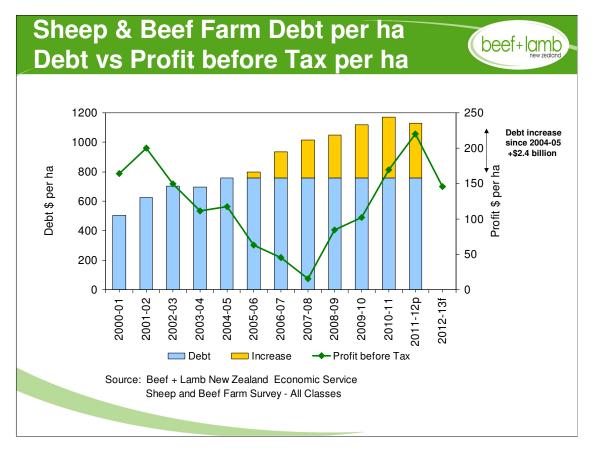


Farm Profit Before Tax for 2011-12 is based on a 80 cents US exchange rate and its associated cross rates with other currencies.

Note that 2007-08 was the lowest Sheep and Beef Farm Profit Before Tax in at least 50 years and coincided with the highest exchange rate in US dollar terms till then.

REG 11-July-2012

Source: P12029, Farm profit.xls



In general from 2005-06 falling profit led to increased overdraft levels for cash to carry-on farm activities that were rolled into term debt. The lowest profit year occurred in 2007-08. Debt was relatively easy to obtain up until August 2008 when the global debt crisis emerged as a major issue in developed countries. Profitability recovered in 2010-11 with good global prices for both meat and wool.

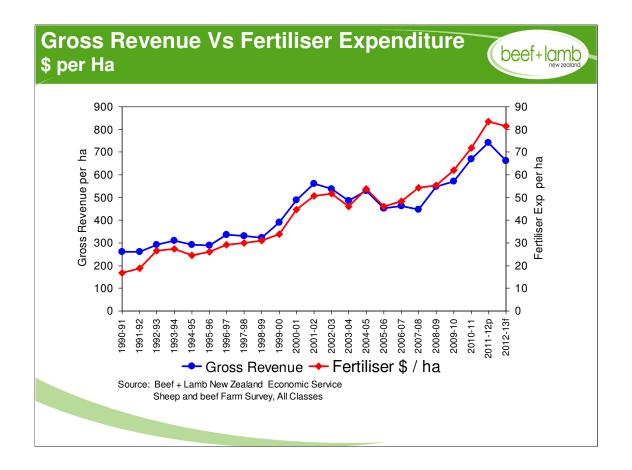
Even so, there is a legacy of debt that built up from refinancing to maintain farm operational and family needs with less emphasis on farm investment. This debt has to be serviced. The ability to service debt is the major focus of lenders today whereas prior to August 2008 equity borrowing was the trend.

One of the hard facts of life is that reducing debt come from tax paid income. For every \$1,000 debt repaid an extra \$492.54 has to be found to meet the taxation requirement.

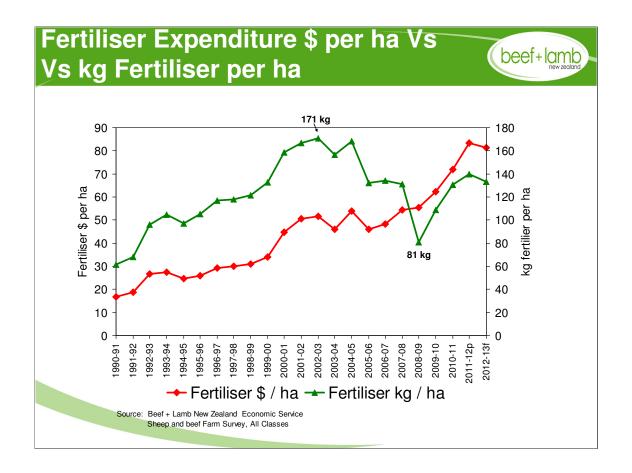
REG 11-July-2012 Source: P12029, Debt.xls



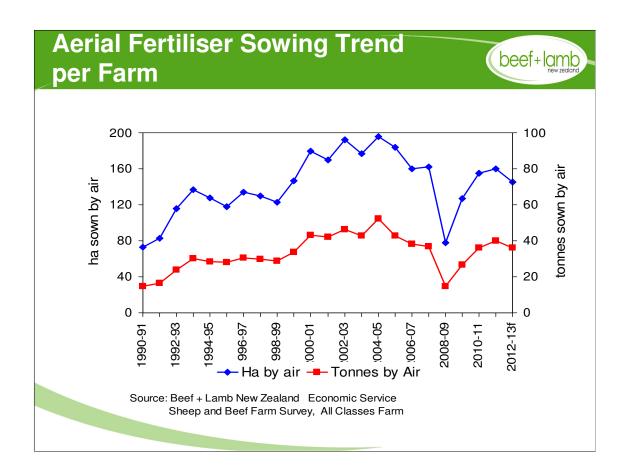
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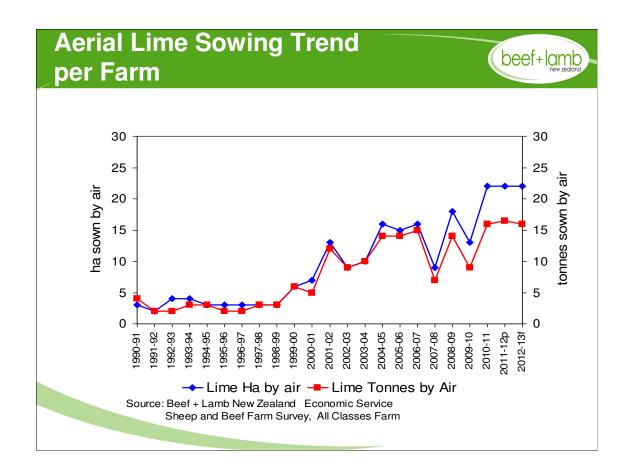
Updated 4 Aug 2012, RMD ref: P12032.xls



Keep in mind that the 1990s was the toughest decade to farm through since the second world war.

Fertiliser demand increased from the publicised and increasing awareness of the importance of fertiliser to generate feed, shorten winters etc.

Low revenue and profitability from 2005-06 to 2009-10 and higher prices were the main drivers behind lower usage from 2005-06 to 2009-10.



## **Estimated Size of the New Zealand Aerial Topdressing Market\***



	No. of	Aerial Fertiliser	Aerial Fertiliser		Aerial Lime	Aerial Lime	
	Farms	Tonnes	Tonnes	%	Tonnes	Tonnes	%
		per Farm	Sector	change	per Farm	Sector	change
2005-06	13,760	42.8	588,928		14	192,640	
2006-07	13,670	38.2	522,194	-11%	15	205,050	6%
2007-08	13,600	36.9	501,840	-4%	7	95,200	-54%
2008-09	12,880	14.7	189,336	-62%	14	180,320	89%
2009-10	12,700	26.7	339,090	79%	9	114,300	-37%
2010-11	12,610	36.1	455,221	34%	16	201,760	77%
2011-12p	12,490	39.9	498,401	9%	17	206,085	2%
2012-13f	12,370	36.0	445,320	-11%	16	197,920	-4%

<sup>\*</sup> Estimate for commercial Sheep and Beef Farms Source: Beef + Lamb New Zealand Economic Service Sheep and Beef Farm Survey

Updated 4 Aug 2012, RMD ref: P12032.xls

### **Summary**



- Prospects for 2012-13
  - a huge headwind from the debt crisis flow-on and recession in Europe
- Weaker sale prices, strong exchange rates combine to lower business activity
- But focus will be there on fertiliser as a key input to pasture production and animal productivity

14 July 2012, RMD ref: P12029.xls

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