

Directions in Milk Recording – the Challenge of Low Milk Prices

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Chief Executive





Our Strategy - Toward 2025

Our Vision

To improve the prosperity and productivity of our farmers

Strategic Themes

- Genetics and information to create superior livestock
- Information to improve decision making to enable superior livestock performance
- Hardware and systems to improve productivity and decision making
- LIC International - adding value for our shareholders, focussing on key markets

Integrity

Innovation

Spirit of co-operation

In tune

Passion



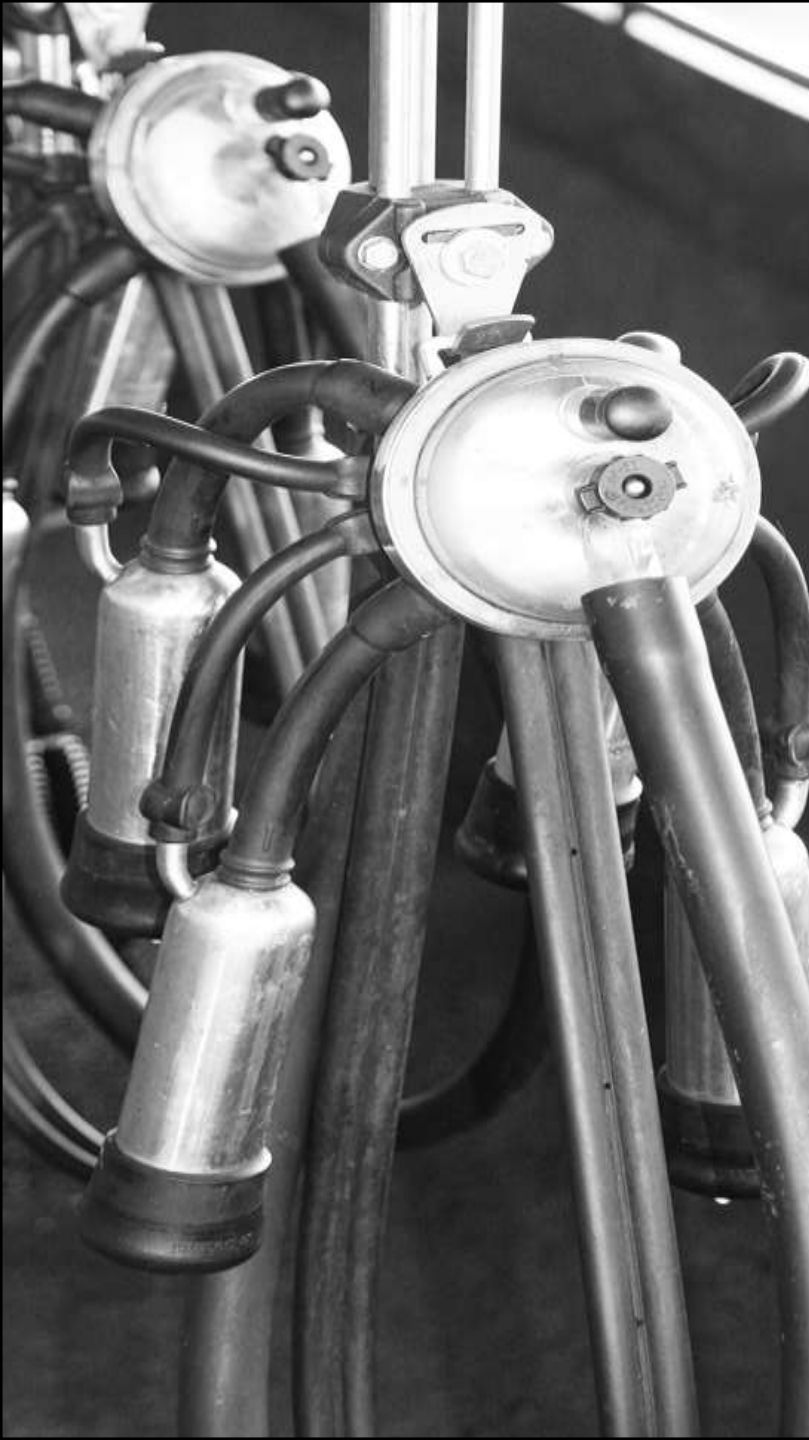
LIC at a Glance

Farm Information

- Dairy animal recording (MINDA)
- Herd testing (milk) – dairy & goats
 - Milk analysis centres (2)
- Ear tags
- Dairy cows, goats and sheep recording and traceability
- Industry statistics

Farm Systems

- Automation products - Protrack
- Heat detection devices – EZ Heat
- On-farm consultancy – FarmWise



LIC at a Glance

Dairy genetics

- 2000 bulls screened (including genomics)
- 180 bulls progeny tested
- Liquid and frozen semen technology
- Extensive nation-wide field service

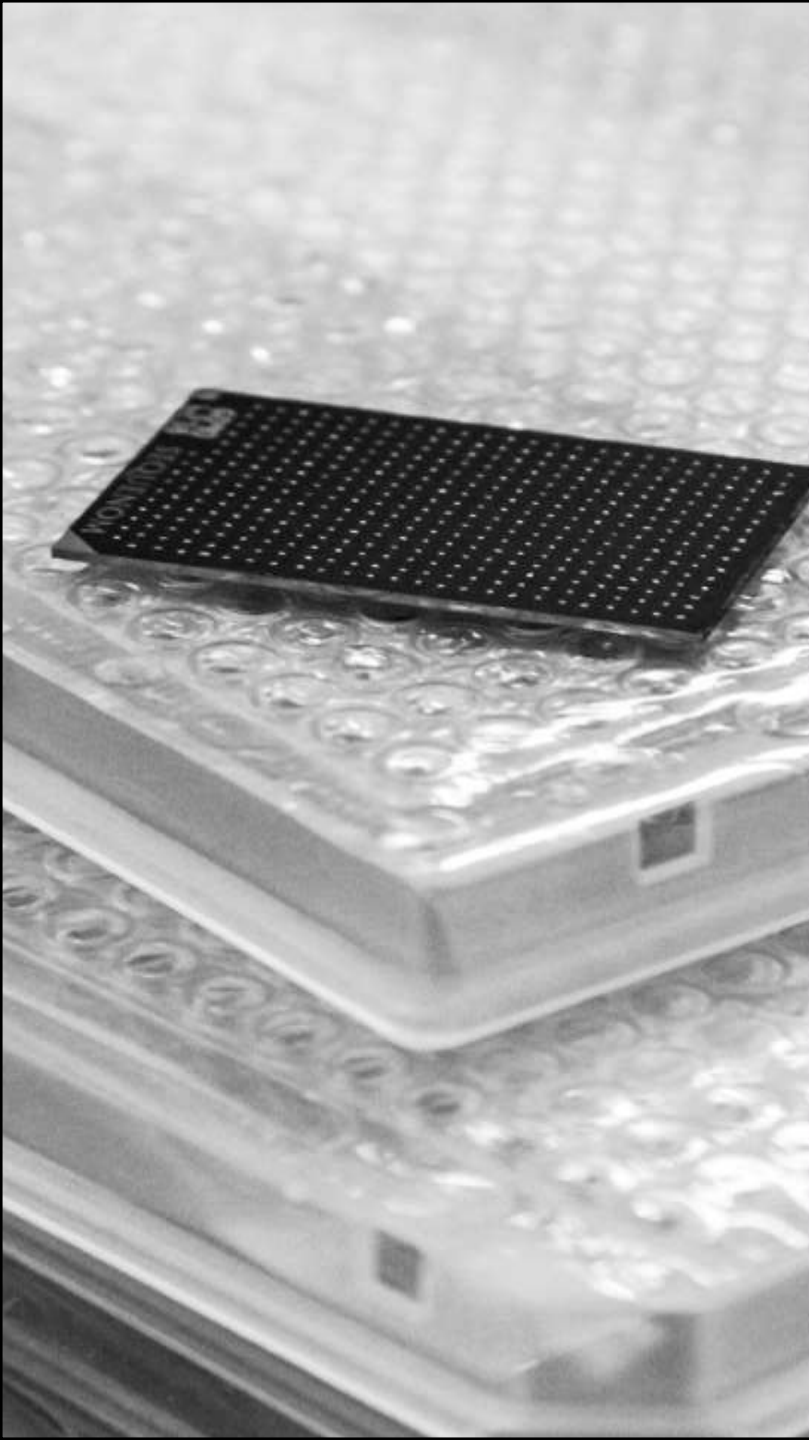
International business

- Chile, Argentina, Uruguay, Brasil, UK, Ireland, China, Australia, South Africa and others

Deer genetics (venison)

Diagnostics

- DNA analysis
- Animal health testing and management



Operational Overview

Inseminations - NZ	4,300,000
Inseminations – International	800,000
Data transactions	100,000,000
Active Animal records	6,000,000
Electronic software customers	10,500
Milk sample analysed	8.2 million
DNA tests	260,000
Automation systems	2000
AI technicians	950
Field sales team	100

LIC: Innovative history

- 1910 Small regional milk testing Co-ops
- 1930s Milk testing throughout New Zealand
- 1940s Artificial insemination of dairy cows begins
- 1960s Sire proving scheme introduced, Milk meters introduced
- 1980s Herd records computerised
- 2000 KiwiCross™ semen available
- 2003 Protrack solutions launched
- 2004 LIC issues investment shares and lists NZAX
- 2008 Genomics used to assist sire selection
- 2014 Protrack EZ Heat launched and breakthrough in SGL achieved
- 2015 LIC Automation formed (incorporating Protrack, DAL, and Lely Sensortec)



Delivering on our Strategy

Where will growth come from?

- New product launches
- Domestic acquisitions
- International growth (genetics, automation, software)
- International acquisitions

LIC Contribution to Value on Farm

STRATEGIC THEMES



Genetics and information to create superior livestock



Information to improve decision making to enable superior livestock performance



Hardware and systems to improve productivity and decision making

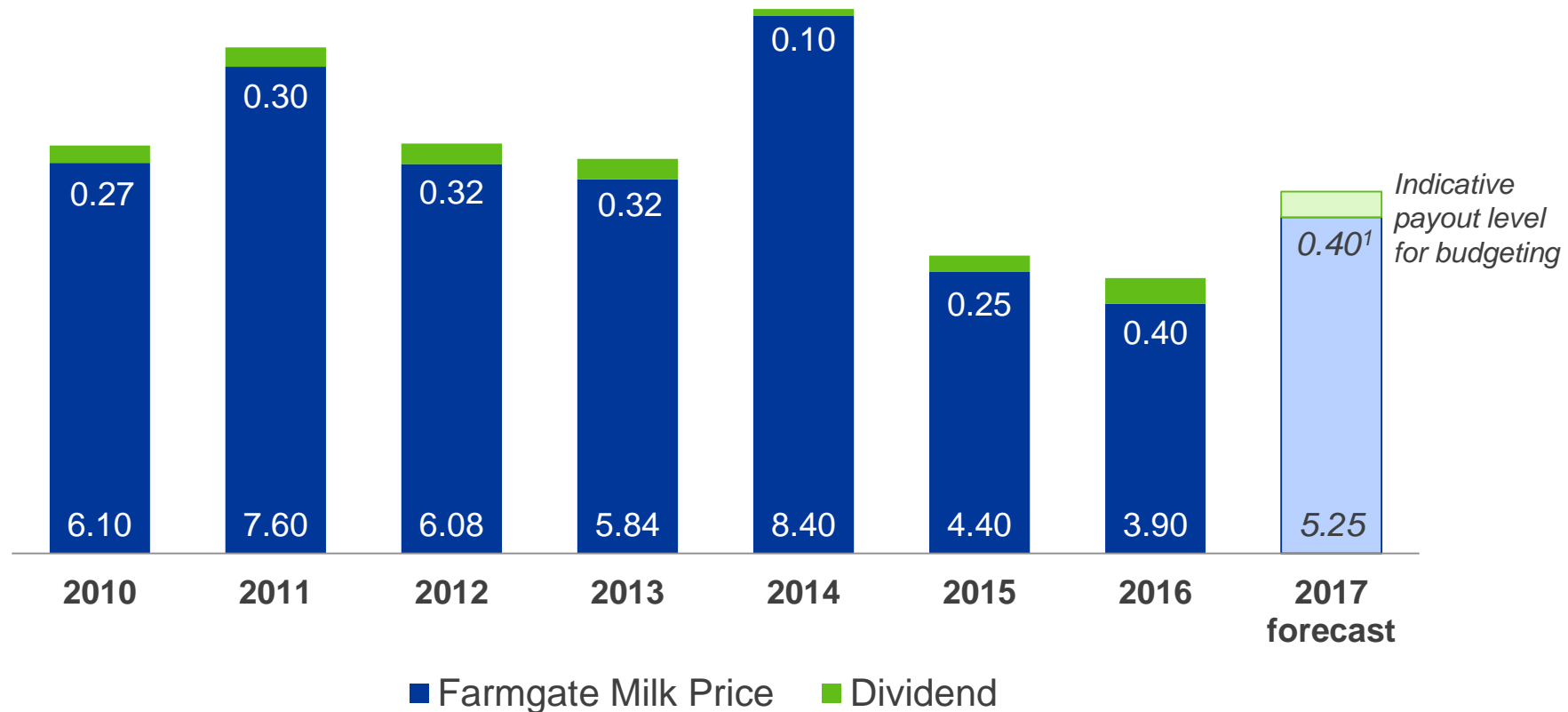


LIC International - adding value for our shareholders, focussing on key markets

Value On Farm

	2014/15	2015/16	
Genetic Merit	\$312m	\$317m	\$322m
Health	\$1.7m	\$2.2m	
Reproduction	\$35m	\$39.5m	\$45.5m
Production	\$40m	\$43m	

Fonterra milk price payout (NZ\$/kgms)

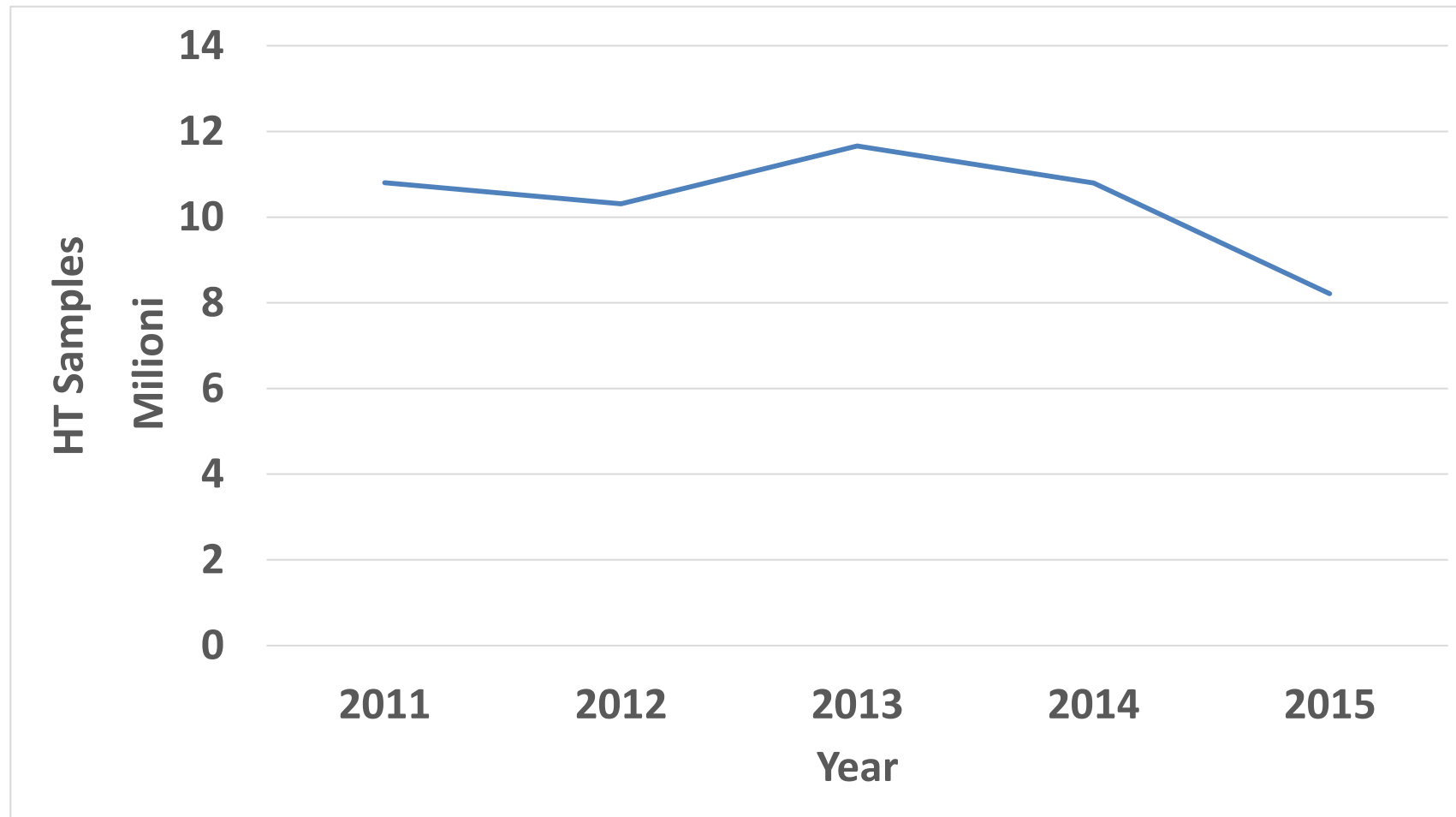


1. For farm budgeting purposes a 40 cent dividend is assumed (based on FY17 EPS forecast 50-60 cents) – this is consistent with Fonterra policy of paying out 65-75 per cent of adjusted net profit after tax over time

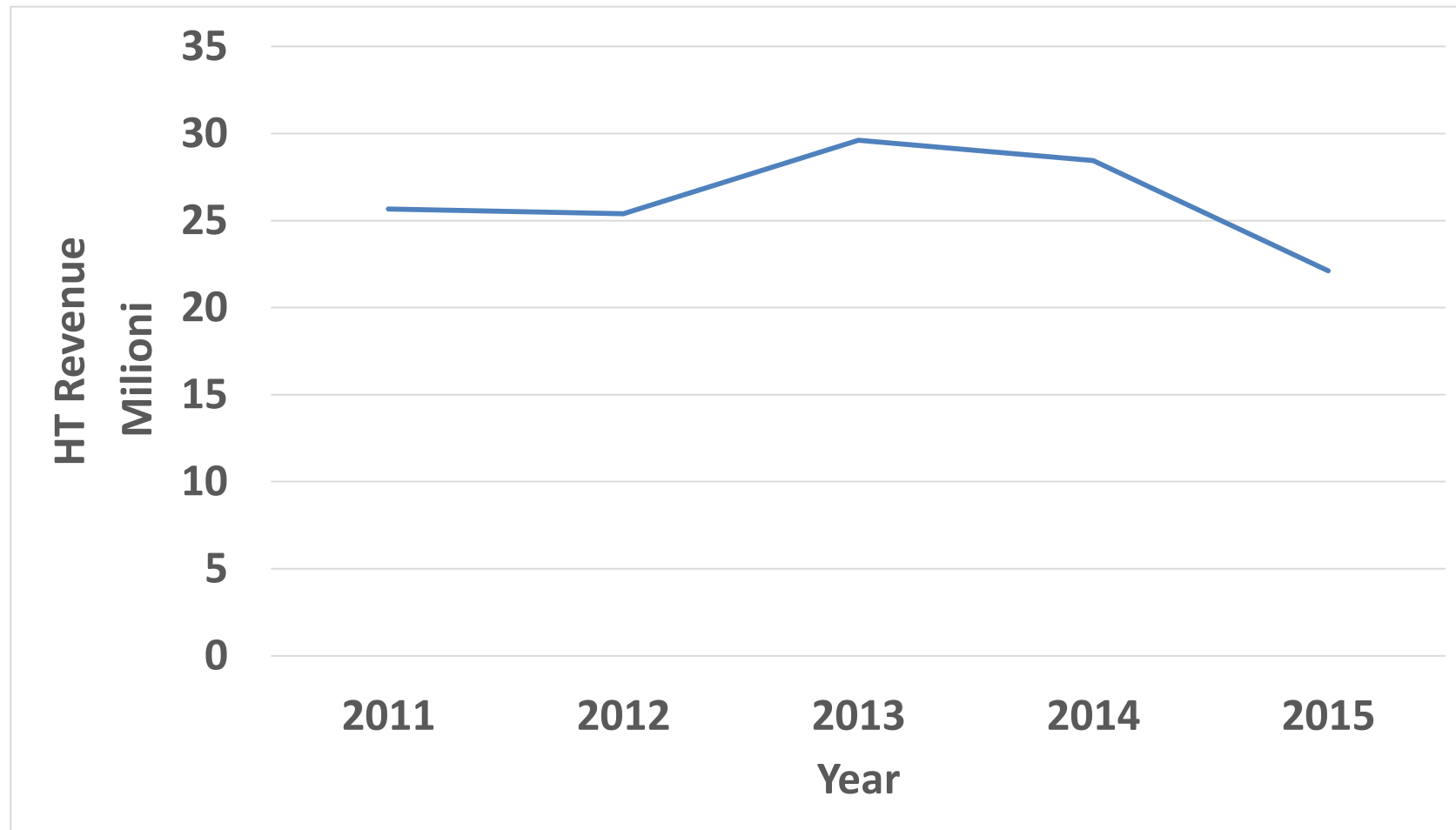
Note: Farmgate Milk Price: \$ per kgMS; Dividend: \$ per share



Herd Test Samples



Herd Test Revenue



What has this meant for LIC?

- Falling volumes with high fixed costs = loss making service
- Overall business made a loss for the first time in 2015/16
- After taking substantial cost out (including significant redundancies) business will be profitable in 16/17, and orders are now increasing

What has this meant for LIC?

- Improving efficiency of collection processes (GIS route mapping)
- Working with farmers to flatten out peaks
- Looking to automate weigh stations
- Sweating assets
- Accelerating development of alternatives

What are the alternatives?

CellSense

- CellSense® is a sensor for the detection and measurement of subclinical mastitis.
- CellSense is an automated California Mastitis Test using non-toxic CellGel® reagent.
- CellSense is installed inline with the milking point and reports the individual cow SCC result in less than 2 minutes from the start of milking.



CellSense

CellSense can be used for:

- Frequent monitoring of individual cow SCC to pick up early lactation infections and act on them before they get out of hand and result in BMSCC penalties.
- For identifying those sub-clinical cows not obvious to the farmer, and because SCC can fluctuate considerably from milking to milking, may not be identified by a herd test or by blanket CMT testing.
- To monitor the herd for high SCC cows and take them out of the vat hence avoiding BMSCC penalties in late lactation.
- In preparation for drying off, recording of results can be combined with information on those cows with a history of clinical infections to make decisions on which cows will receive DryCow Therapy (DCT) at drying off and which cows are to be culled.
- When farmers feel they need to, e.g. when BMSCC increases or there are signs of clinical mastitis in the herd.

YieldSense

- YieldSense® utilises full flow measuring technology meaning that milk flow is not disrupted due to complex moving parts or flow restrictions.
- YieldSense® provides the following outputs:
 - Yield
 - Fat, Protein & Lactose percentages
 - Bloody and watery milk, blocked air admission detection
 - Milking statistics
 - Wash performance data



Improvement. It's in our nature.
It's in our name.