DairySA

Dairy Australia

2021 DairySA Central Conference

THURSDAY 18 MARCH 2021

McCracken Country Club, Victor Harbor

BESTON GLOBAL FOOD COMPANY

Michael Connor

Chairperson, DairySA

BESTON
GLOBAL FOOD COMPANY

DairySA

Dairy Australia

DAIRYSA 2019/20 SNAPSHOTS

206 DAIRY FARMS OPERATING STATEWIDE

PRODUCING OVER **492M** LITRES OF MILK

70 EVENTS HELD

ENGAGING **1155** DAIRYFARMERS AND INDUSTRY MEMBERS

PLUS

35 DAIRY DISCUSSION GROUPS ENGAGING **400** FARMERS

media/socials:

15 EDITIONS OF THE ELOOP READ 2614 TIMES

10 NEWSLETTER EDITIONS DELIVERED TO 232 FARMS

1297 FOLLOWERS, 266 REACHED DAILY

487 FOLLOWERS 71 POSTS, 1167 LIKES

DairySA

Dairy Australia

DairySA Team

Melissa Hunter
Kylie Boston (resig)
Anna Eddy
Katie Moorhouse
Beck Burgess &
Cathy Ashby

MELISSA HUNTER
REGIONAL MANAGER

Role

- Board Governance
- Team Management and Development
- Financial Management
- Service Deliver and Project Management
- Stakeholder Engagement

BECK BURGESS
REGIONAL EXTENSION OFFICER - CENTRAL

Role

- Farm Business Management program coordination
- Workshop Delivery and Coordination
- Dairy Discussion Groups
- Central Conference Coordination

CATHY ASHBY
REGIONAL EXTENSION OFFICER – SOUTH EAST

Role

- Young Dairy Network Coordination
- Land Water Carbon Program Coordination
- Workshop Delivery and Coordination
- Dairy Discussion Groups

KATIE MOORHOUSE
COMMUNICATIONS COORDINATOR

Role

- Content Writer and Coordinator Eloop, Newsletters, Media Releases, Website
- Communication of workshops and events
- Ladies Lunch Coordinator

ANNA EDDY
FINANCE AND ADMINISTRATION COORDINATOR

Role

- Coordination Financial Management System
- Office administration
- Manage accounts receivable and payable

THANK YOU!

DairySA

Dairy Australia

KYLIE BOSTON

DairySA Board

L – R: Don Stolp, Andrew Caval, Rebecca Walmsley, Ben McHugh,
Gary Zweck, Hamish Browning, Lauren Brinkmann, Michael Connor, Melissa Hunter,
Glen Dohnt. (Absent Michael Krichauff)

THANK YOU

Putting Back – the importance of Industry Investment

Tom Cosentino

Executive Officer – South Australia Dairy Industry Fund

BESTON GLOBAL FOOD COMPANY

Meningie Fodder

DairySA

Dairy Australia

South Australian Dairy Industry Fund

‘Putting Back – the importance of industry investment’

Tom Cosentino

History of the Fund

In 2012, the South Australian Dairyfarmers' Association and Coles explored the opportunity for a regional milk brand.

Robert Brokenshire, dairy farmer and Member of Parliament at the time, along with Ken Lyons, CEO of SADA progressed with Coles, basing the product on similar brands elsewhere in the country.

After collaborating with Parmalat and a local advertising house, the brand was launched.

How it works

SADA Fresh milk is packaged and distributed by Parmalat Australia.

Under the licensing agreement, Parmalat pays SADA 20 cents per litre (40 cents per container) for every litre sold.

SADA Fresh is currently sold through Coles supermarkets across South Australia.

The SADIF is open for project applications year round, and the Board meets quarterly to evaluate new and current projects.

The Executive Officer manages contracts and payments.

A great opportunity

The structure of the SADIF provides a lot of freedom.

- No requirement for Government, or third-party intervention.
- Exists in perpetuity.

It is not funded by a levy on farmers.

- No additional direct costs to farmers.
- Ability to measure project benefits beyond ROI.

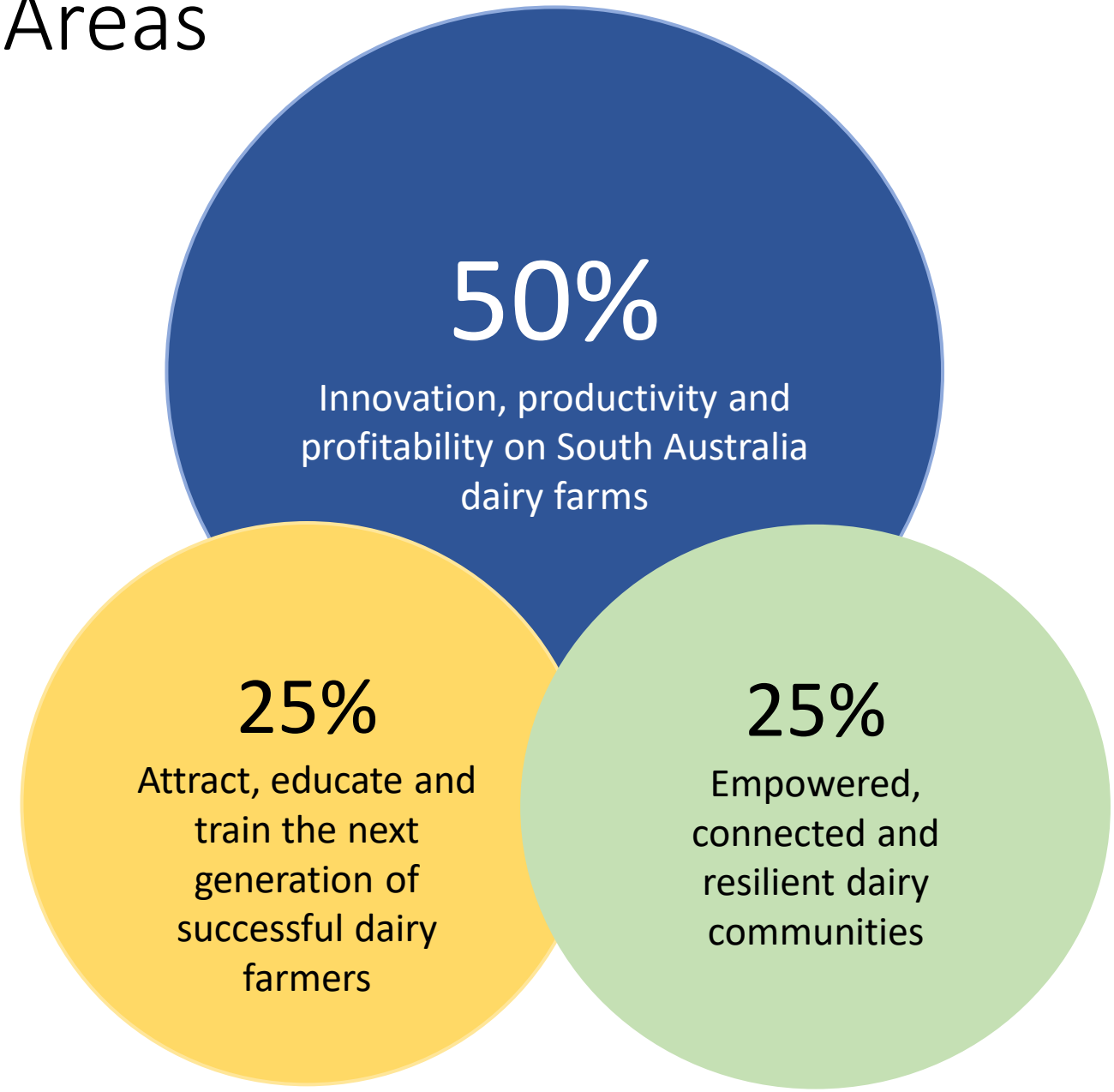
There is a requirement for only one layer of decision making.

- The Board provides final approval of project expenditure.
- Decisions are based on consultation with like minded groups but is not dependent on them.
- Decisions do not need to be ratified by another Board or Group.

Where the money gets spent

- Practical impact: Tangible, measureable benefits
- Greater good: For the SA dairy industry
- Local: Sustainable, vibrant, connected communities
- Accountable: Transparent, honest and responsible
- Independent: Autonomous, bipartisan
- Governance: Systemic, evidence-based decisions

Funding Target Areas



Some current projects

- SADA Fresh Cows Create Careers 2021.
- DairySA: Supporting Wellbeing in the SA Dairy Community.
- Limestone Coast Leadership Program.
- Research into models for methane recapture units.
- Dung beetle research support.
- Traceability Support Scheme.
- Industry Advocacy.
- Various sponsorships, small projects & branding.

What success looks like

The Fund delivers, and is recognised for:

- generating productivity and profitability gains for farmers
- fostering stronger dairy communities through the provision of practical grants
- supporting and attracting the next generation of dairy farmers

Policy makers, industry representatives and farmers broadly support the Fund and recognise its importance to the South Australian dairy sector

The long standing relationship with Coles continues

The Fund administers more funds more successfully and effectively than ever before

The quality and number of applications to the Fund increases by 50 per cent with two years

New industry partners will be applying for funding and investment, providing new momentum for the grants program

A call to action

The Fund is at its strongest with input for dairy farmers.

You reap what you sow when it comes to industry development.

The SADIF needs ideas and it needs partners.

And and it needs you, your family and friends to drink a bottle of SADA Fresh milk every day.

Contact the SADIF

Tom Cosentino – Executive Officer

0450 040 634

eo@livestocksa.org.au

SADA

08 8293 2399

sada@sada.asn.au

Investing in the Farm – how can dairy investment work for you?

Nigel Pannett
Managing Director, Compass Agribusiness

BESTON GLOBAL FOOD COMPANY

Meningie Fodder

DairySA

Dairy Australia

Compass Agribusiness

DairySA | Dairy Australia

Dairy SA

2021 Central Conference

Compass
Agribusiness

INVESTING IN THE FARM

PURPOSE & INTENT

Discuss alternative funding options for dairy farmers and what can we learn from corporatisation and investors

Intro to Compass Agri

OUR 4 PILLARS OF SERVICE	
Advisory & Consultancy	Asset Management
HR & WHS Management and Administration	Succession Planning

United Kingdom

2018 market study:

- Farmers represented 45% of all buyers of farmland, of that, 85% were purchasing land to expand current operations.
- 55% buyers were institutional & corporate, incl. conservation organisations
- Agriculturally used land could shrink by 30% in the UK in the next 30 years

Source: Savills Research

United States

- 2017 census reported that just over 60% of farmland is owner operated
- 39% of farmland is rented, either from corporate or family organisations

Source: USDA

New Zealand

- 75% family / sharemilking viewed as ‘family corporate’ – simply managing it as a business.
- Clear definition of family ownership vs non-family ownership doesn’t exist due to business changes and demands and the ever-evolving responses to them.
- Common thread is that all farms have responded by professionalising – finances, operations, environment.
- If non-common (i.e. not related) shareholders is viewed as non-family this is represents 25% (and growing) of dairy farms. (e.g. equity partnership, joint partnerships, multiple entity owners)

Source: Dairy NZ

Farming in Australia Now

90% of farms are Family owned Produce 50% of Australia's food	10% of farms are Corporate owned Produce 50% of Australia's food

Large family farms have generated, on average, higher returns and provided most of the capital that underpins the Australian farm sector. (*ABARES Outlook 2018*)

Improving productivity will be critical to Australian agriculture. That's going to require investment across the board—in land, in technology and in our people. (*ABARES Outlook 2016*)

Let's talk about how we can support Australian Dairy businesses

- **Grow,**
- **Increase scale,**
- **Attract new people,**
- **Exit / enter the industry**

What are the options?

- Family owned
- Equity Partnerships
- Sharemilking/Share ownership arrangements
- Corporate ownership
- Other

Partnership Example from Scotland

[redacted]

Who else is Funding dairy farms?

Domestic funds

Wholesale investors

Offshore pension funds

Family office(s)

Banks

Various seasonal capital providers

Non-bank debt

What are Investors Looking For?

Return on Investment

Farm Operations and Management

Environmental and Animal Responsibility

People/Development and Community

Recap

- ★ Right now Australia's Dairy industry has the opportunity to embrace investment enabling those wanting to get in (or out) the opportunity to do so.

- ★ Funding is changing. There are a number of options – one of them is right for you. Alignment is critical for all parties involved.

- ★ Start conversations early
- ★ Seek advice to fully understand all the options

You Tell me

Who in this room is looking for an opportunity to get into ownership?

Who in this room is looking for an opportunity to cycle out of ownership?

Other questions?

Lets open up the room.

Nigel Pannett, Managing Director
nigel@compassagri.com

THANK YOU

compassagri.com

Big Tech: what's next for dairy

Nico Lyons

AMS Project Lead, Dept Primary Industries NSW

BESTON GLOBAL FOOD COMPANY

Alltech LIENERT

DairySA

Dairy Australia

Department of Primary Industries

Big Tech: what's next for dairy?

Dr Nicolas Lyons
Leader Dairy
28/March/2021

CHALLENGES

- Consolidation
- Complexity of farming systems
- Infrastructure
- Labour
- Consumer demands
- Productivity
- Profitability

Dairy installations

- 74% installed 10+ years ago
- 51% installed 15+ years ago
- 60% had no big upgrade in last 5 years

- What impact is this having in our systems?
  - Longer milking times
  - Pressure on staff
  - Attractiveness of the system / industry
  - Milking routines
  - Impact on animals
  - R&M
  - Limitations to productivity?

Source: Gargiulo et al (2018)

OPPORTUNITIES

- Many options available
- Technology is one of them
- Great development over the last years
- Fantastic tool
- Impacts multiple aspects of the business
- Can enhance management

Source: Aidan Connolly (2nd Precision Dairy Conference, Rochester MN USA, 2019)

REASONS to think about technology

- Make farming more attractive to people
- Free up time
- Consistency
- Variability
- Understand better the systems
- Data for better decisions
- Higher profitability
- Lifestyle / physical aspects
- Attracted to technology

TYPES of technology available

Source: J. Bewley, Halachmi et al (2019), Eastwood et al (2016)

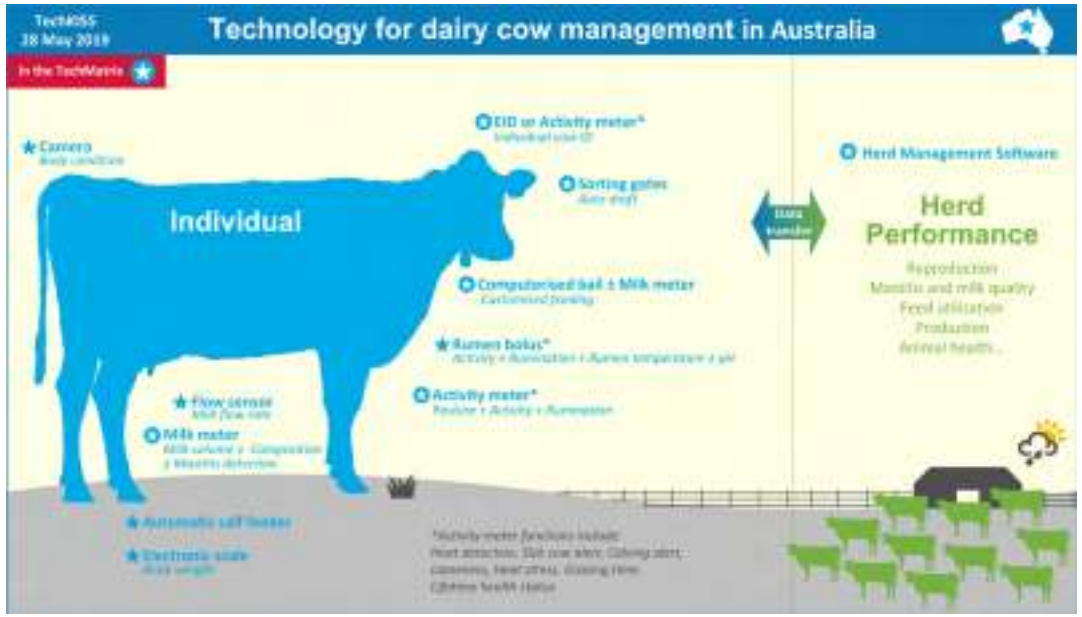
Sometimes they come together

Selecting technology

- Why?
- When?
- What?
- From what is available?
- Do I wait for the next big thing?
- From which company?
- Any additionals?
- At what scale?
- Based on what?
- What will I achieve?

AVAILABILITY of technology

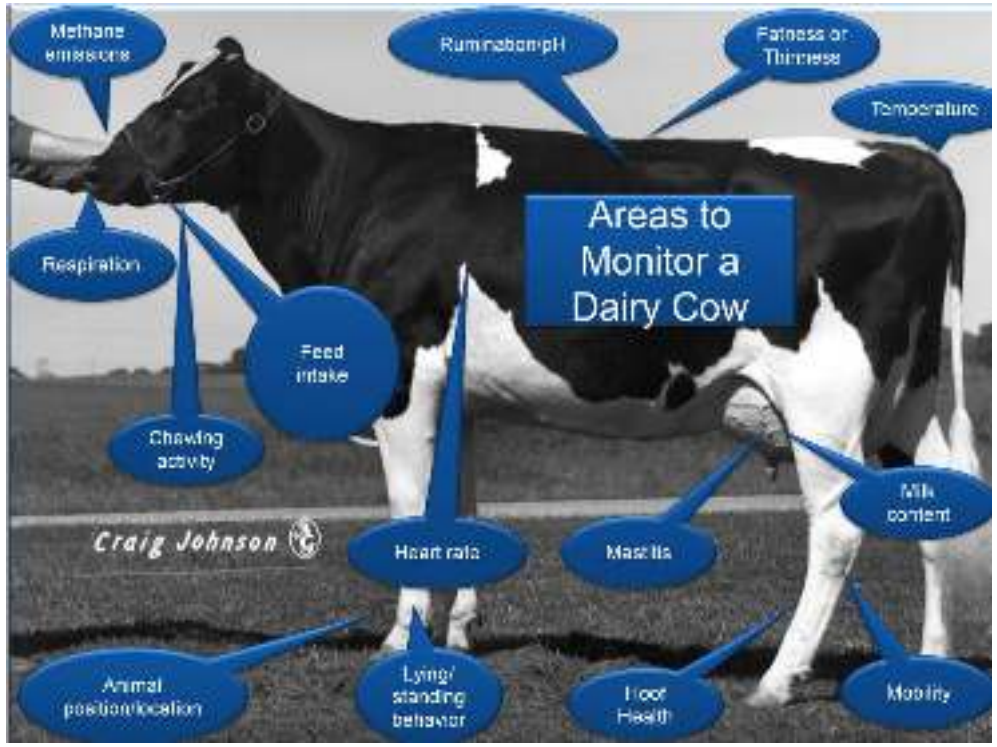
- ID, sorting, feeding, milk metering, activity, and software
- ~20 companies
- ~80 products



Manufacturer or main supply	EID	Auto drafting	Individual bail feeding	In-line milk meters	Activity meters	Herd management software
AGIS	-	-	-	-	CowManager	-
Afimilk*		AfiSort	AfiFeed	AfiMilk MPC, AfiLab analyzer	AfiAct II Leg Tag, Silent Herdsman	AfiFarm 5 series & Afimilk Cow Info app
Allflex/SCR	NLIS tags	SCR Sort Gate	-	SCR FreeFlow FFS30	Heatime Pro+, SenseHub, Semex ai24#	Heatime Pro+ or SCR Data Flow II & Healthy Cow app, SenseHub
Alta Genetics#	-	-	-	-	CowWatch	VAS DairyComp 305
BouMatic*	Boumatic RT tag	SmartDairy Sort, EZ Sort Gate	Boumatic feed system	SmartControl Meter, SmartFlo	HeatSeeker 5, HeatSeeker RT, HeatSeeker RT+RL	HerdMetrix
DairyMaster	NLIS tags	DairyKing Drafting Gate	FeedRite	Weighall Milk Meters, Commander Milk Meter	MooMonitor+	MilkManager & Farm Messenger app, MooMonitor+ app
DataGene	-	-	-	-	-	HerdData app
DeLaval*	B Transponder, NLIS tags	DeLaval Sort Gate	One Place Rotary Feed, Herringbone Feed	Milk Meter Fi5, Yield indicator Fi7, MM27BC, Herd Navigator sampler	Activity Meter System	DelPro & DelPro Companion app
Easy Dairy	-	Easy Draft	Easy Dairy Herringbone Feed, Easy ID Rotary ID system	Eli Pro Eli SAMM	COWcontrol [Nedap]	Easy Dairy Desktop [app pending]
Eli Innovation	-	Mistro Draft	Eli Mobile Feeder	[Eli systems]	COWcontrol [Nedap]	Mistro Shed
Farm Automation	-	iDairy Smart Draft	iDairy feed systems	-	-	iDairy & iDairy App
GEA*	-	AutoSelect gates, CowScout sort gates	GEA feed controller, CowScout feed system	Dematron 70 (or 12), Metratron 21	Rescounter III, CowScout	DairyPlan C21 & App
Genetics Australia#	-	-	-	-	HerdInsights	-
Hico#	-	-	Mistro Feed	-	-	Mistro Farm 5
Jantec	-	Jantec Sorting System	Jantec feed systems, Jantec Mobile ID Grain Feeder	CellSense, YieldSense+	-	Jantec Herd Identification
LIC	-	Saber Draft	-	Saber SCC, Saber Milk	-	-
Waikato Milking Systems*	-	Navigate Sort Gate	[Jantec feed systems]	Electronic Milk Meter, Smart D-TECT Sensor	Navigate Heat & Health	-
Zoetis	-	-	-	-	SmartBow	-

Source: Tech KISS (2018)

Sensors



- Cameras (thermal, 3D, RGB)
- Sound
- Surface
- Accelerometers
- Position
- Pressure
- Bolus
- Electronic noses
- Production / Flow

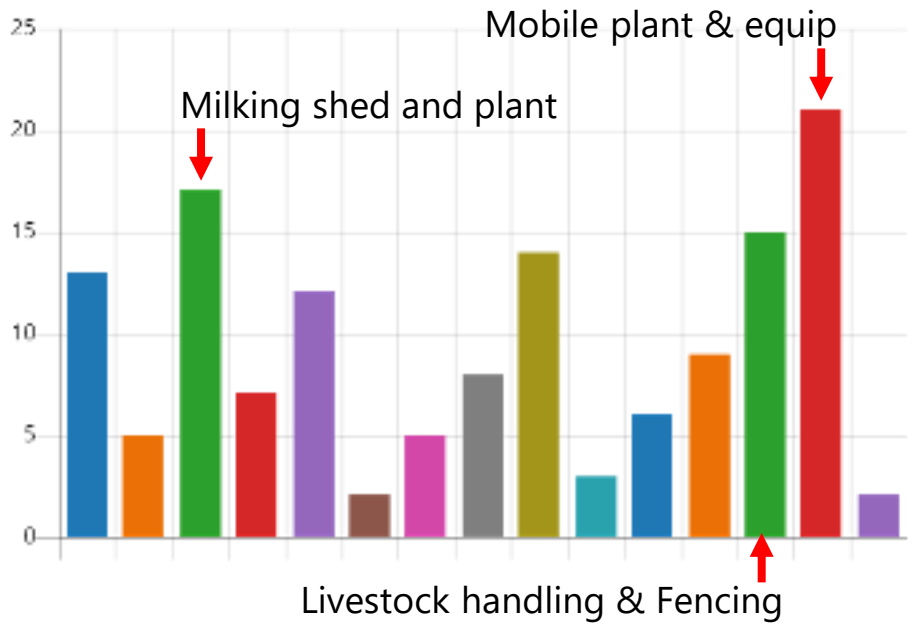
Source: J. Bewley, Halachmi et al (2019)

Decision process

- DIY research
- Involve the team (internal and external)
- Talk to farmers / Visit farms
- Talk to equipment providers
- Ask questions
- Expectations
- Impact on your farming business
- In general:
  - Companies: Good understanding of technology, have worked with several farmers, not independent, not farmers
  - Farmers & Advisors: Very familiar with farming system, but can’t be up to speed with all the technology options available
  - You: Need to take a decision and make it work

Barriers

- Uncertainty
- Other priorities *('How are Australian dairy farmers investing capital back into their business?')*
- Return on investment
- Cost (purchase and maintenance)
- Access to financing and borrowing capacity
- 'Want to see the technology operating first'
- 'Would like to try the technology first'
- Additional task - Lack of time
- 'Don't know what I would do with data'
- Skills and capability
- Service and support
- Reliability / Accuracy



Source: NSW DPI (2021), Borchers & Bewley (2015), Eastwood & Renwick (2020)

ADOPTION of technology (AUS)

Dairy farmers with larger herd sizes adopt more precision dairy technologies

71%

60%

43%

37%

35%

Larger farms had more technology

Fuente: Gargiulo et al (2018)

Adoption of technology (NZ)

39%

29%

29%

27%

24%

Rotary dairies had more technology

Source: Dela Rue et al (2020)

EXPECTED future adoption

Dairy farmers with larger herd sizes adopt more precision dairy technologies

79%

75%

66%

60%

57%

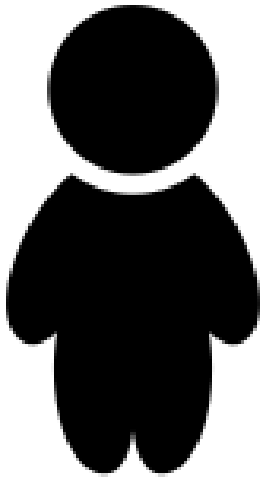
Similar thoughts regardless of farm size or role

Source: Gargiulo et al (2018)

How has it changed management or decision making?

Best decisions = Data + Experience + Intuition + Context

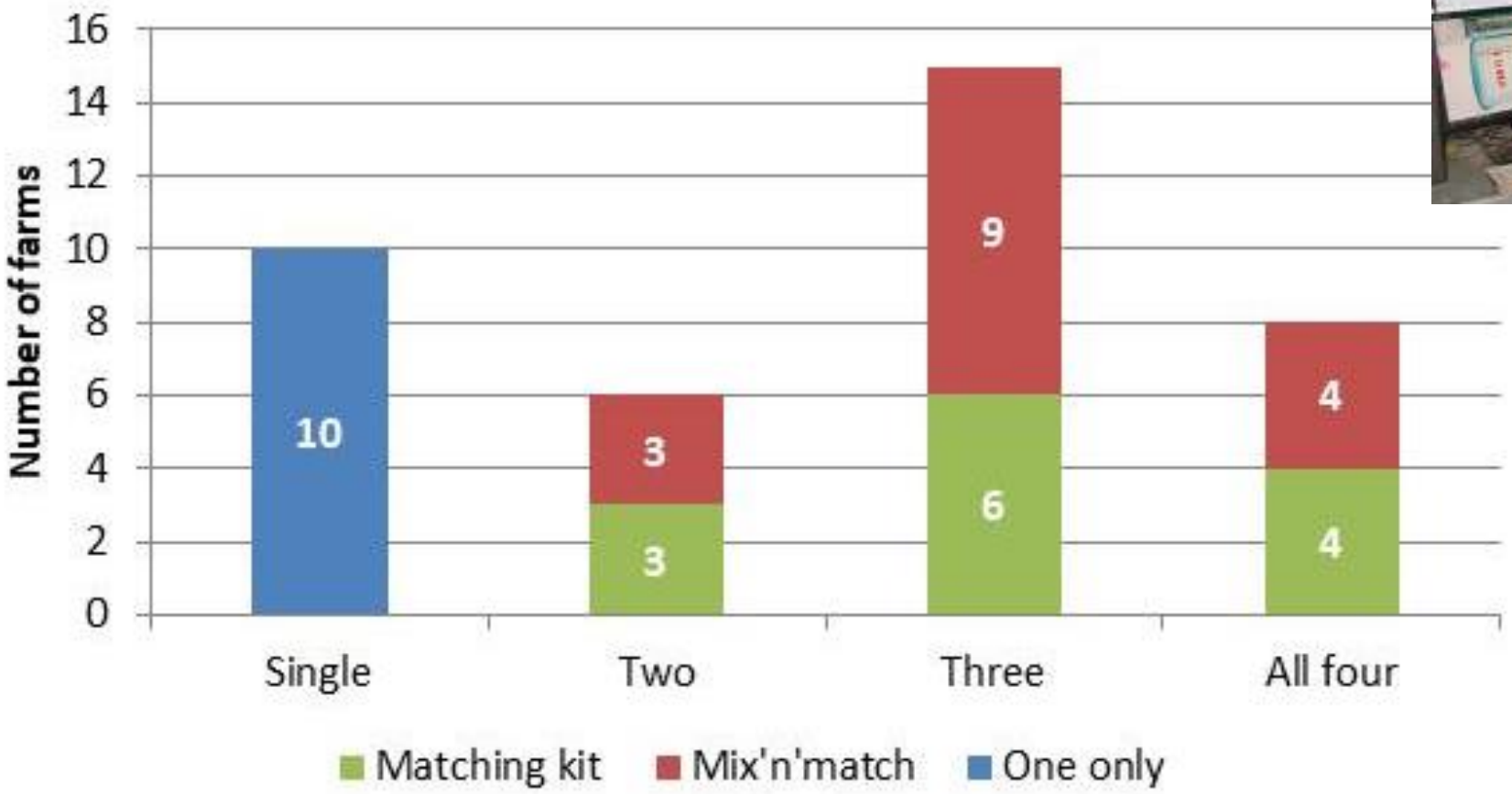
Integration



Infrastructure – Processes – Roles

New interactions and possibilities!

Integration on-farm



Only ~50% buys one same brand

Source: Tech KISS (2018)

Generating value

Available

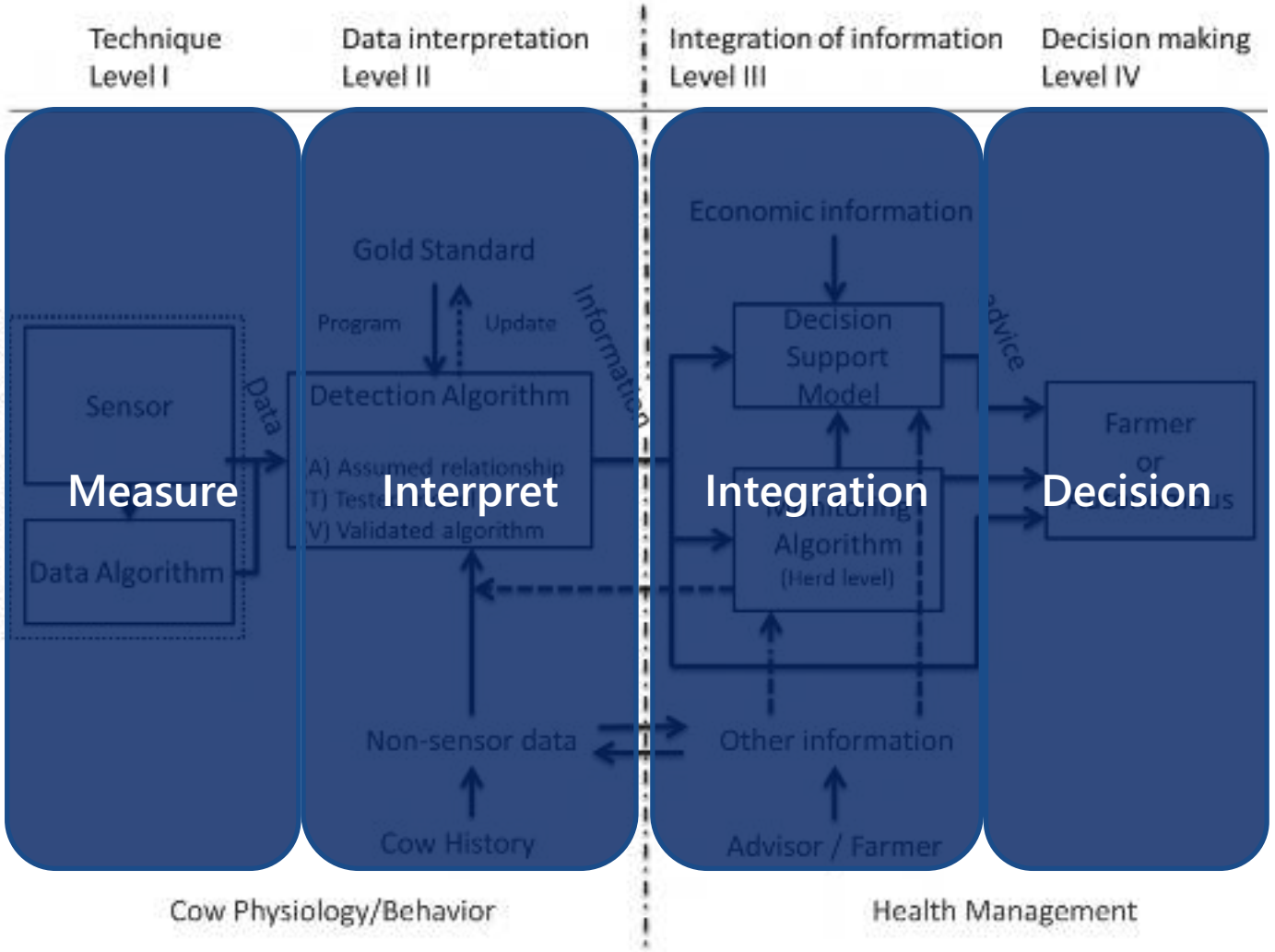
Known

Adopted

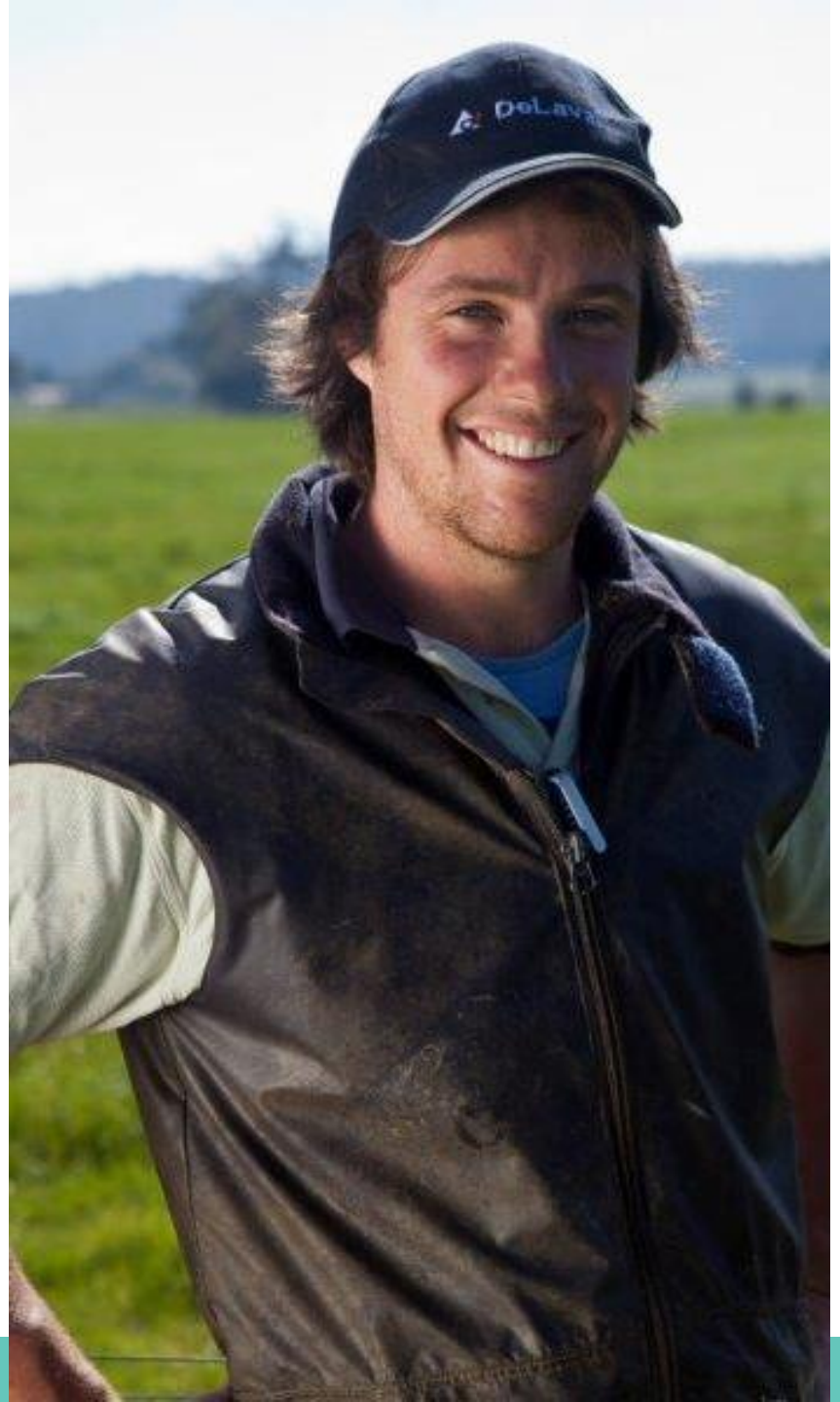
Used

Used properly

Generating value

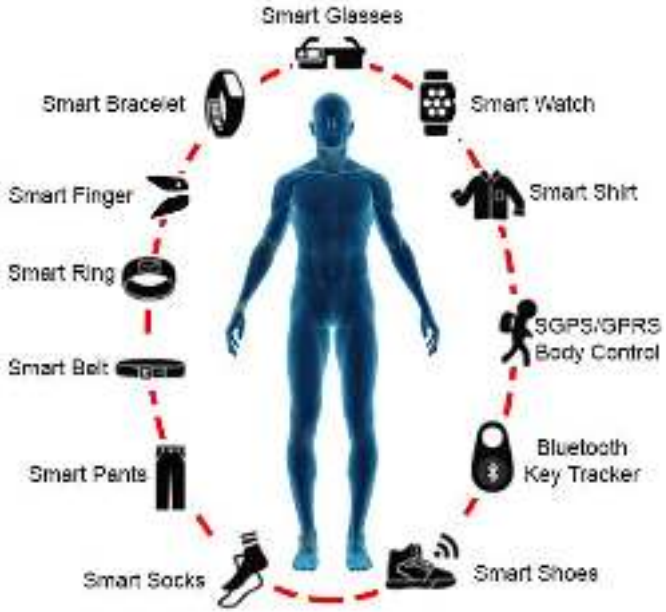


Source: Rutten et al (2013)

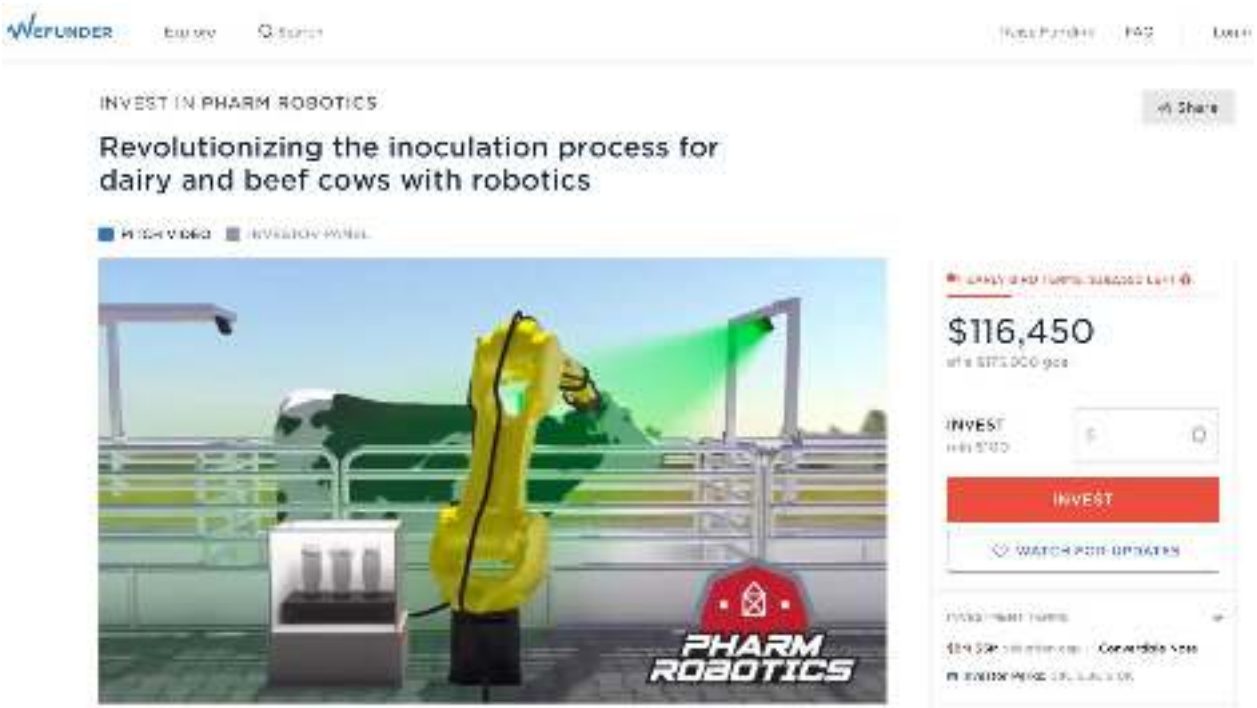


SMARTfarm

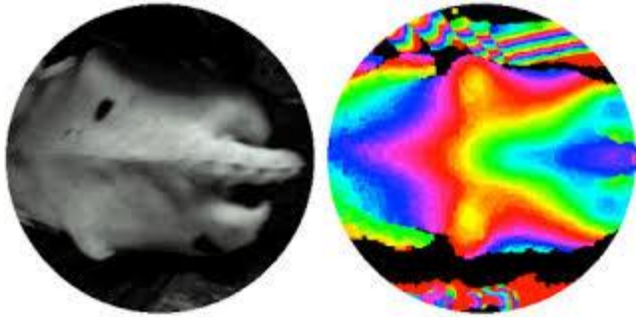
DeLaval



Source: Rodriguezs et al (2018)


WeFUNDER
INVEST IN PHARM ROBOTICS
Share
Revolutionizing the inoculation process for dairy and beef cows with robotics
$116,450
INVEST
INVEST
PHARM ROBOTICS

EATING



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MilKey
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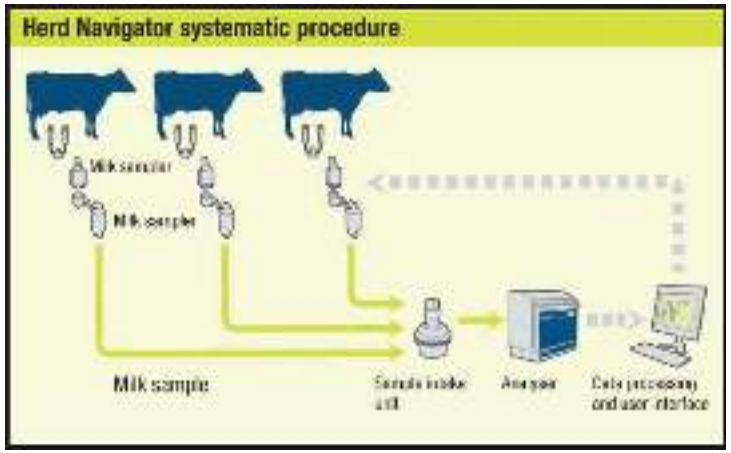
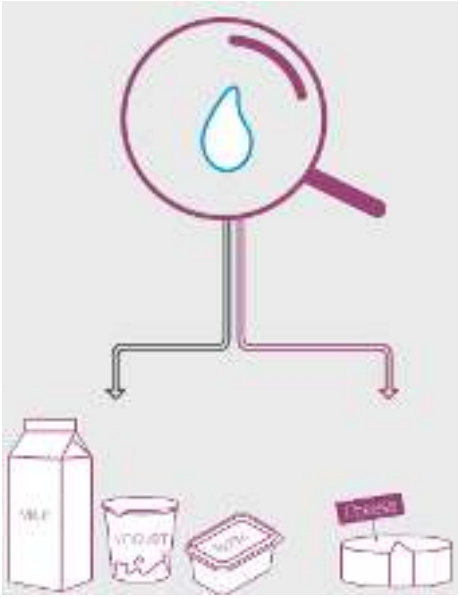

Herd Navigator systematic procedure
Milk sample



VENCE

AGERSENS

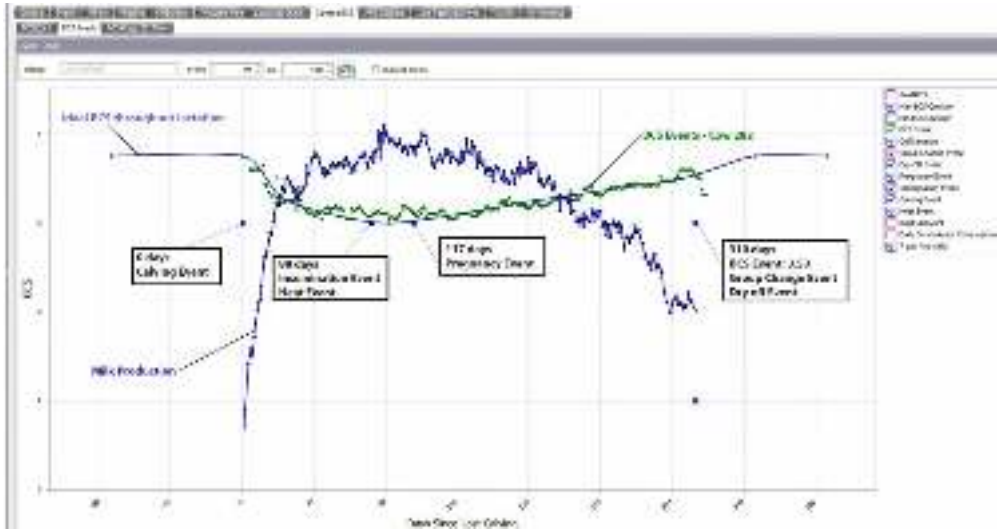
HALTER

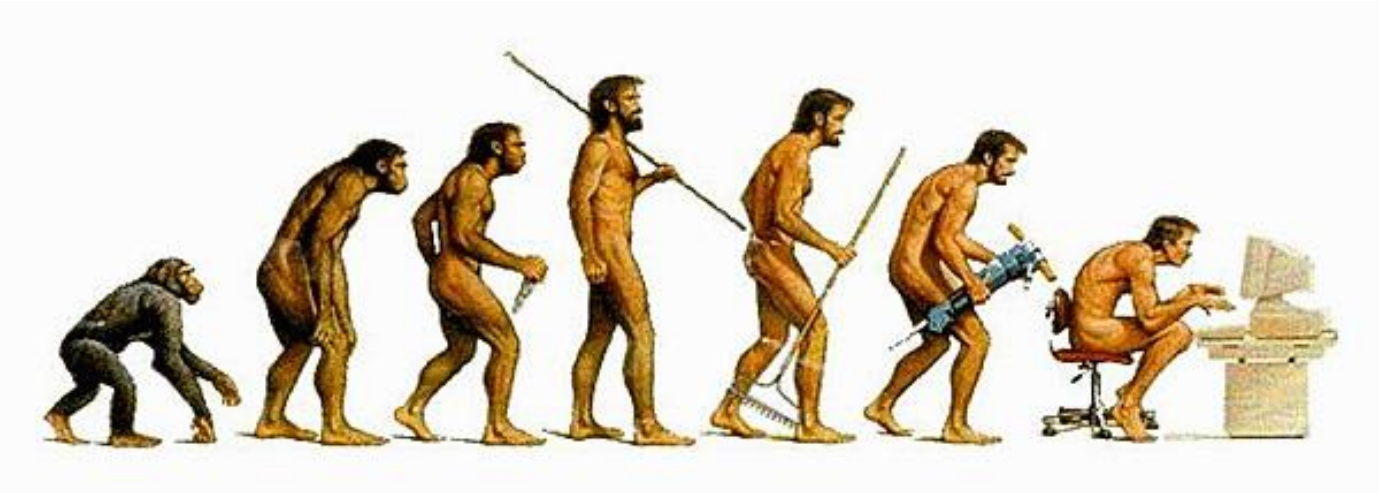
THINK.
DIGITAL
Educat

CURRENTLY IN HEAT COWS

COW ID	GROUP NAME	DIM / AGE	HEAT INDEX	TERMINATION LOW	HOURS TO AI	DAYS SINCE LAST HEAT	DAYS FROM AI
5617	Mavkirot	92	92	-18	17	37	N/A
5635	Mavkirot	72	92	-32	11	N/A	N/A
5389	Amlata	346	88	-27	7	0	N/A
5595	Mavkirot	148	84	-7	17	21	N/A
5747	Eglot	473	78	N/A	10	21	N/A
5741	Eglot	484	78	N/A	5	7	N/A
5748	Eglot	472	60	N/A	22	17	N/A
5334	Amlata	272	53	-19	10	22	N/A
5708	Eglot	550	52	N/A	7	21	N/A

1/2





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Thank you very much!

nicolas.lyons@dpi.nsw.gov.au

Robotic milking: expectations vs reality

Nico Lyons
AMS Project Lead, Dept Primary Industries NSW

BESTON GLOBAL FOOD COMPANY

Alltech LIENERT

DairySA

Dairy Australia

milking edge

Robotic milking: expectations vs reality

Nicolas Lyons (NSW DPI)

DairySA Central Conference

18/March/2021

Dairy Australia

NSW GOVERNMENT | Department of Primary Industries

DeLaval

KEY CONCEPTS OF AMS

Automatic

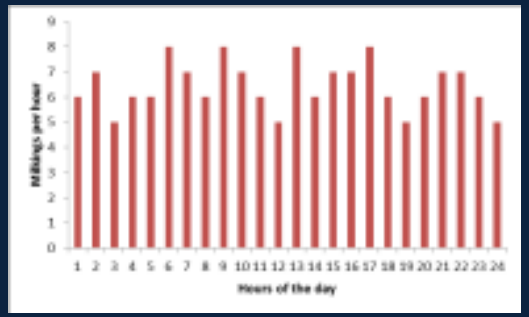
- Milking-related tasks

Voluntary

- Incentives

Distributed

- Milking 24/7



INDIVIDUAL MANAGEMENT OF ANIMALS

milking | edge

AUTOMATIC MILKING SYSTEMS (~ROBOTIC MILKING)

History

- 70's – First concepts
- 80's – Initial R&D – Prototypes
- 1992 – First commercial farm (The Netherlands)
- 2001 – AMS arrives in Australia (& NZ)
- 2006 – FutureDairy Project (R&D)
- 2018 – Milking Edge Project (Training & Extension)
- 2021 – World ~ 31,000 farms

  AUS 46 farms (+ 4 signed up/installing;

  ~ 50 farms considering)

GROWTH IN AUSTRALIA

Slower than expected

35% AMS farms increased the number of robots since commissioning

50% AMS farmers might expand their operation in the next 3-5 yrs

60% of farmers & 80% of service providers expected increase adoption by 2025

52-72% of farmers would consider AMS as an option (NSW DPI, 2015 and 2021)

Source: Gargiulo et al (2018)

EXPECTATIONS / THOUGHTS

milking | edge

milking | edge

‘IT IS ONLY FOR SMALL FARMS’

Pasture-based
Australia
16 units
900 cows

Indoors
Chile
72 units
4400 cows

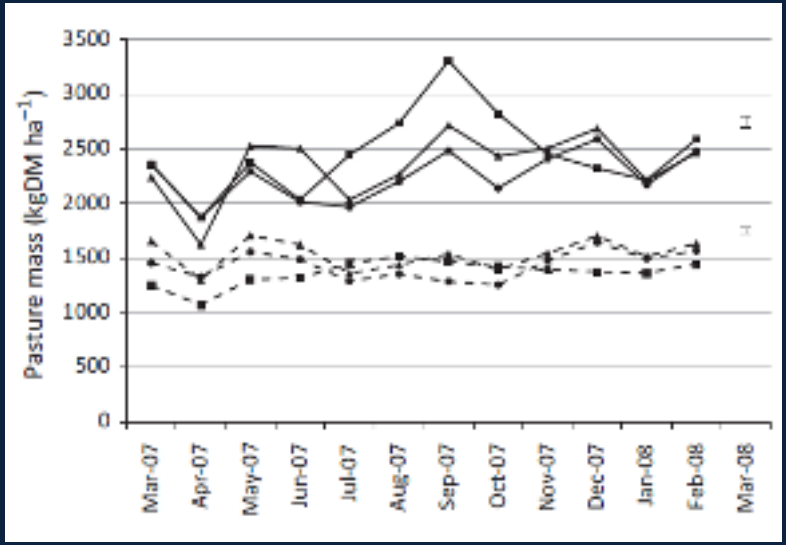
‘YOU NEED TO UNDERFEED YOUR COWS’

Feed allocation will impact voluntary cow traffic, milking frequency, milk production and animal health and welfare

‘DOESN’T WORK IN GRAZING SYSTEMS’

‘PASTURE UTILISATION IS IMPACTED’

Same management principles - 13.5 Tn DM/ha (Commercial farms 6.4 Tn DM/ha)



Source: Clark et al (2015)

LOOKING THROUGH DATA

milking | edge

CHANGE IN MANAGEMENT

66% changed their health management strategy

80% found illness detection to be easier because of the AMS and associated health monitoring software

19% health detection more difficult (not seeing every cow and her udder 2x/d (67%) and needing to rely on technology (33%)

Most common issues that improved were mastitis (41%), reproduction / fertility (34%) and lameness (25%)

Little difference in most reproductive strategies. Higher use of activity meters or other electronic aids [67% activity meters]

Source: Tse et al (2017), Keeper et al, 2017

ANIMAL BEHAVIOUR

milking | edge

You won't see every cow every day.

You will see the cows you need to see!

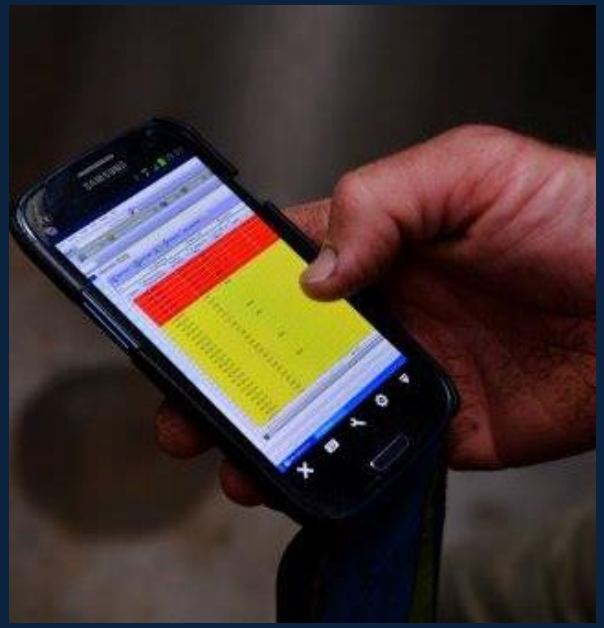
With robots:

- Farmers spent less time in direct contact with cows
- Cows had a reduced flight distance
- Cows had less sign of stress

What is our current knowledge about animal behaviour?

Source: Wildridge et al. (2020)

REMOTE ACCESS



CAPITAL COST INVOLVED

There is a lot of misconceptions of how much an AMS installation costs

Three main scenarios: Greenfield – AMS vs CMS, Upgrade or Replace CMS by AMS

Do your research and compare options (apples with apples)

Reach out to the AMS equipment providers

Cash and Profit:

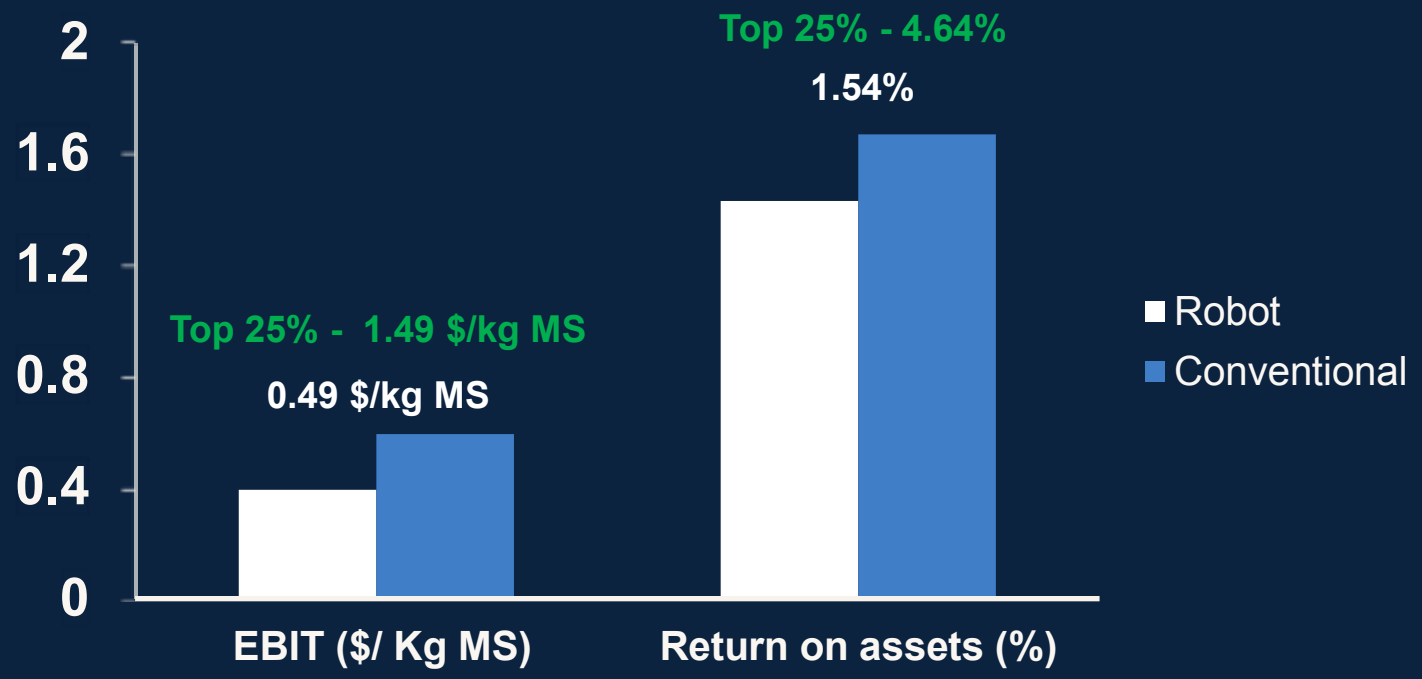
- Can I afford AMS and will I be able to service additional debt?
- Is AMS a good investment of capital compared to other alternatives?

SAME LEVEL OF PERFORMANCE

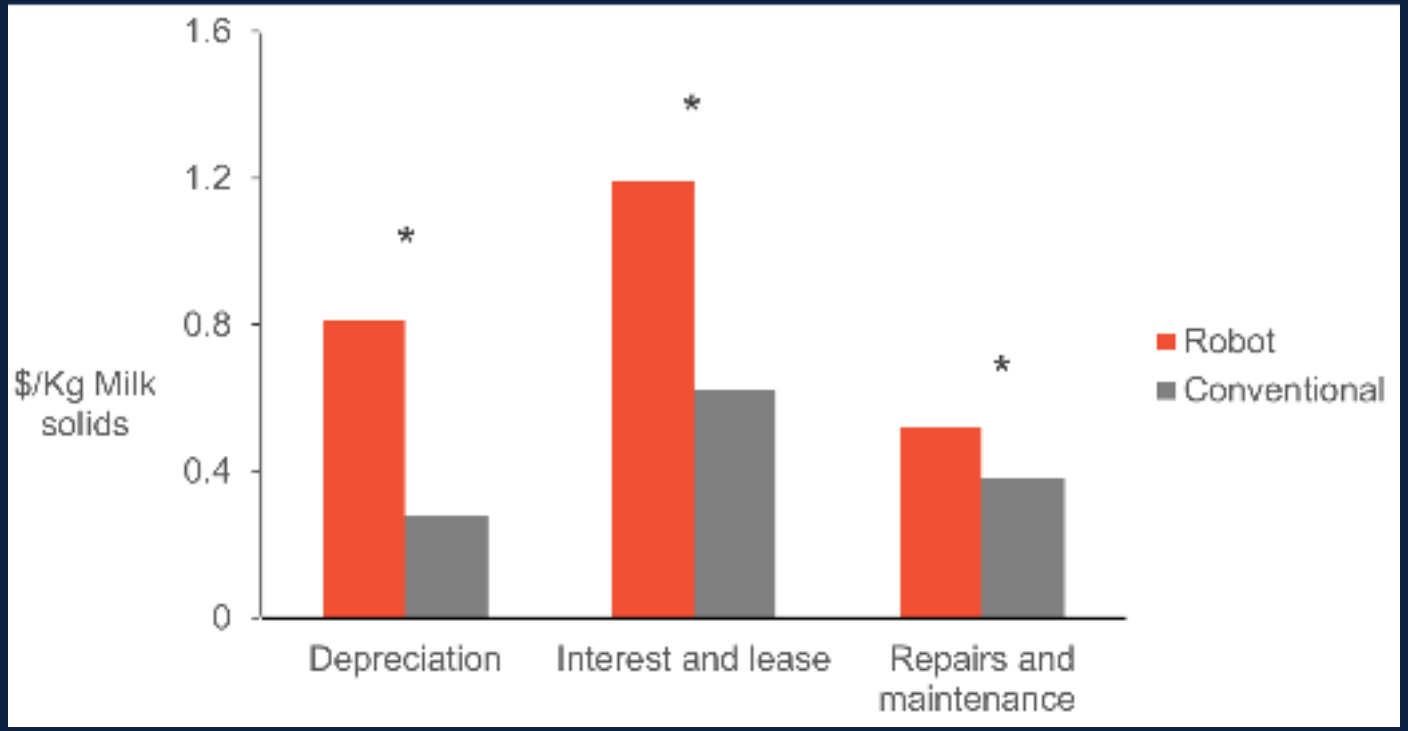
Physical and economic comparison of pasture-based automatic and conventional milking systems

Source: Gargiulo et al (2020)

NO DIFFERENCES IN OVERALL PROFITABILITY

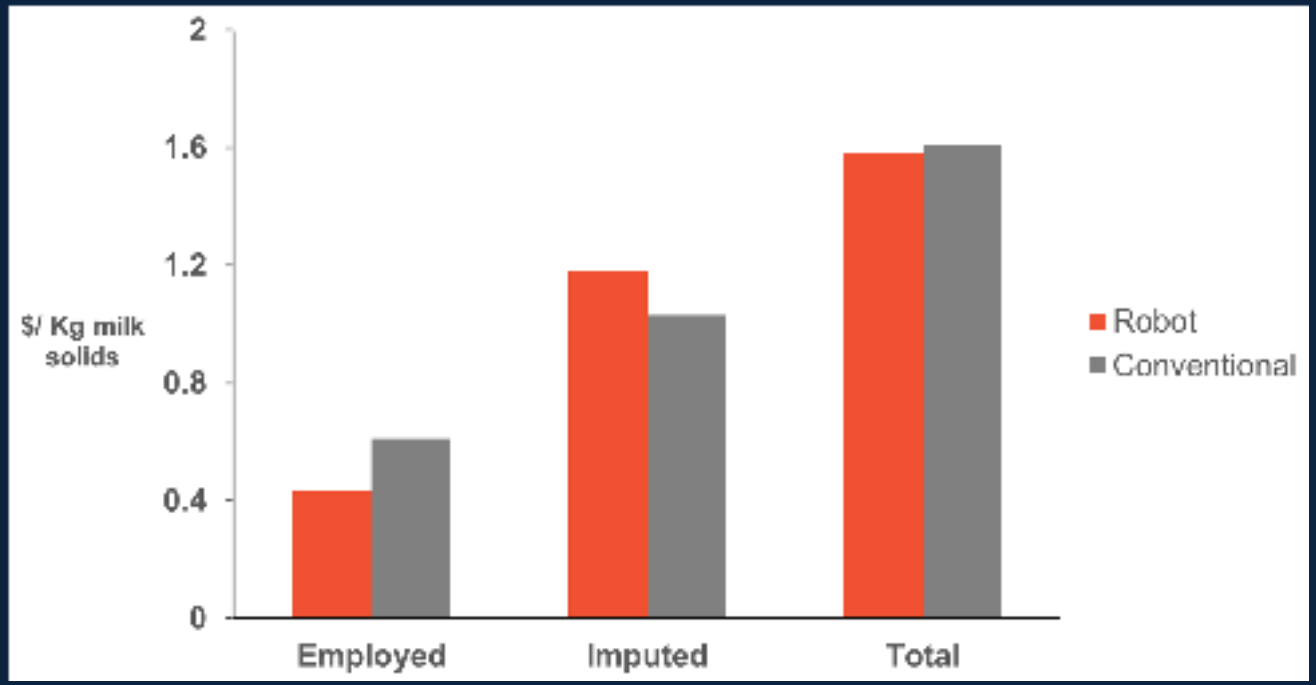


HIGHER COSTS RELATED TO CAPITAL

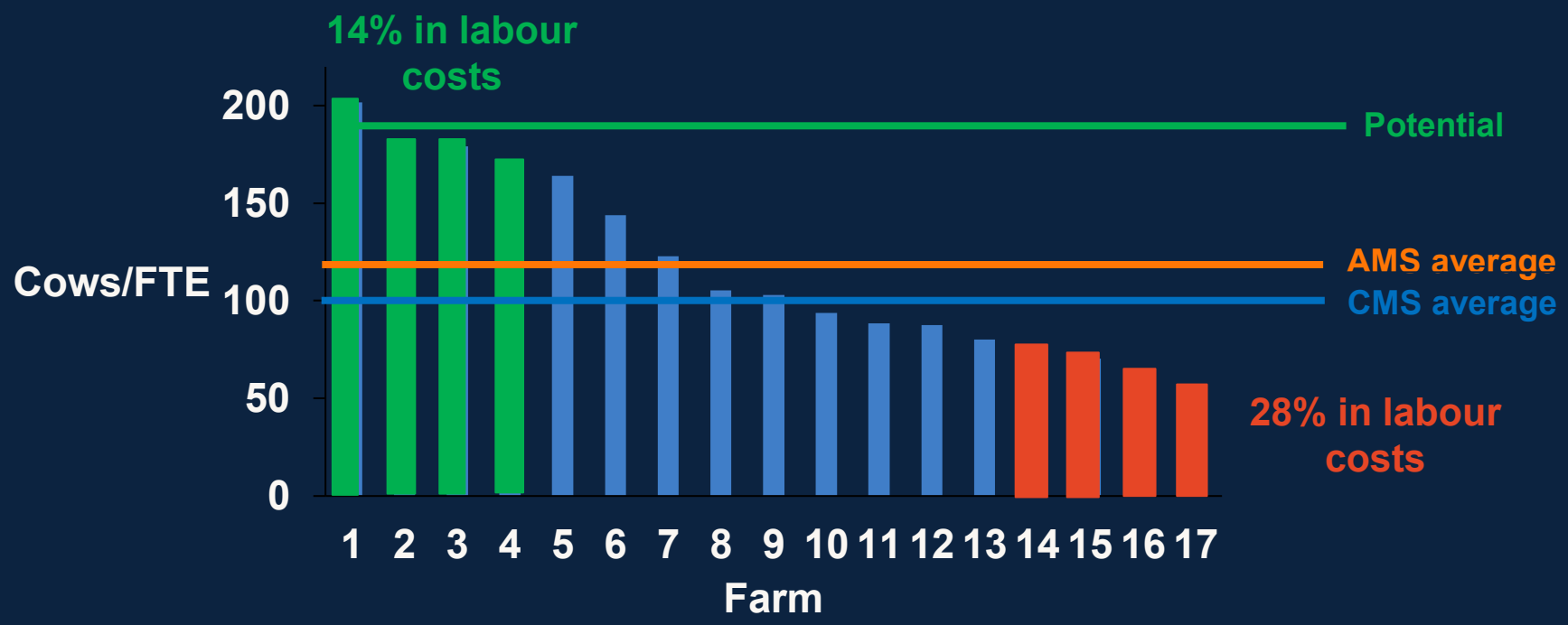


Source: Gargiulo et al (2020)

LABOUR COSTS ARE SIMILAR



Source: Gargiulo et al (202)



Source: Gargiulo et al (2020)

LABOUR AUDITS

Source: FutureDairy

‘YOU NEED TO HAVE TWO DAIRIES’

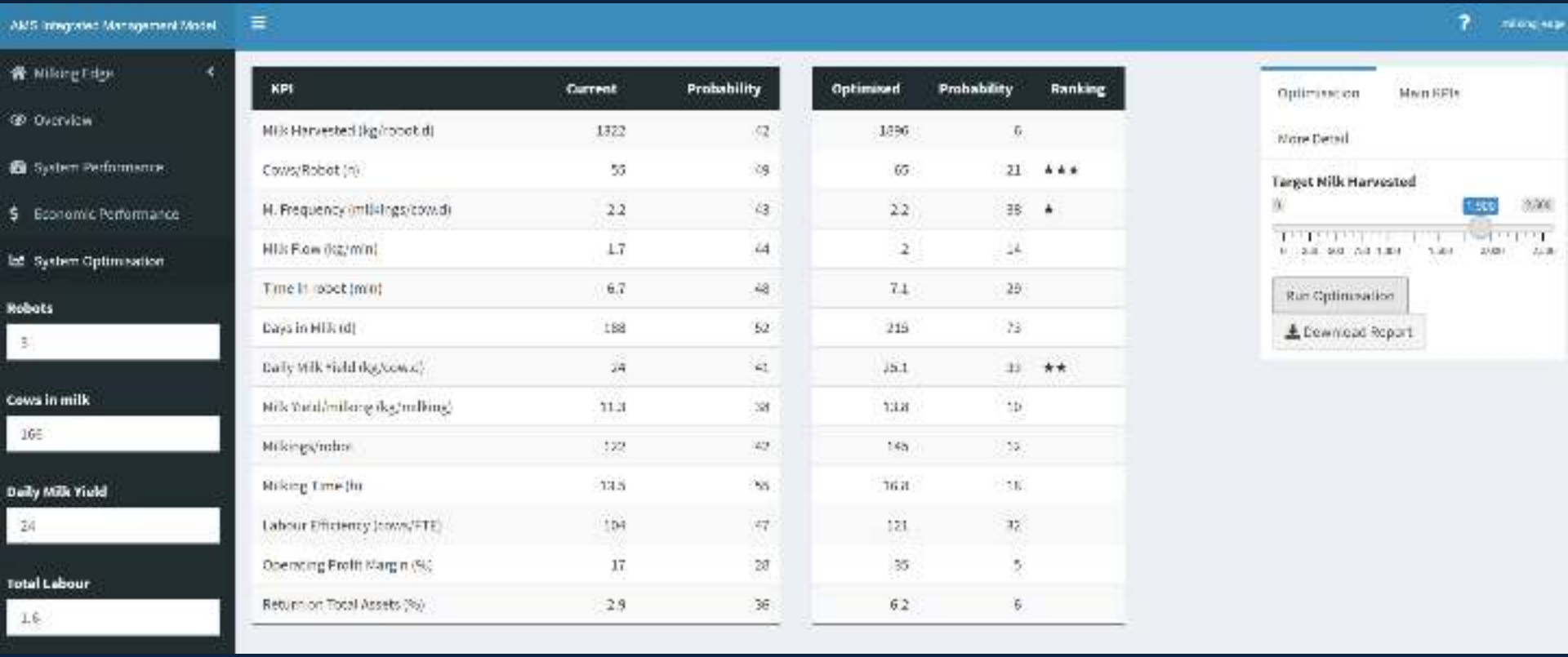
- ~20% of AMS farmers also have a conventional dairy
- Having two dairies is not a requirement to running an efficient AMS operation
- Does provide some flexibility and efficiencies/synergies
- When similar management is applied to the AMS and CMS farms (and there has been time to adapt to the AMS system) the profitability can be similar between systems
- Labour savings in the AMS roughly balanced out the additional depreciation costs

MAIN FACTORS ASSOCIATED WITH PROFITABILITY

Milk harvested/robot

Labour

TOOLS



KPI	Current	Probability
Milk Harvested (kg/robot/d)	1322	42
Cows/Robot (n)	55	49
M. Frequency (milkings/cow/d)	2.2	43
Milk Flow (kg/min)	1.7	44
Time in robot (min)	6.7	48
Days in Milk (d)	188	52
Daily Milk Yield (kg/cow/d)	24	41
Milk Yield/milking (kg/milking)	11.3	38
Milkings/robot	122	47
Milking Time (h)	13.5	55
Labour Efficiency (cows/FTE)	104	47
Operating Profit Margin (%)	17	28
Return on Total Assets (%)	2.9	36

Optimised	Probability	Ranking
1896	6	
65	21	★★★
2.2	38	★
2	14	
7.1	29	
215	73	
25.1	33	★★
13.8	16	
145	13	
16.8	16	
121	32	
35	5	
6.2	6	

Source: Gargiulo (in development)

MANAGEMENT IS KEY

milking | edge

TWO SIDES TO A STORY

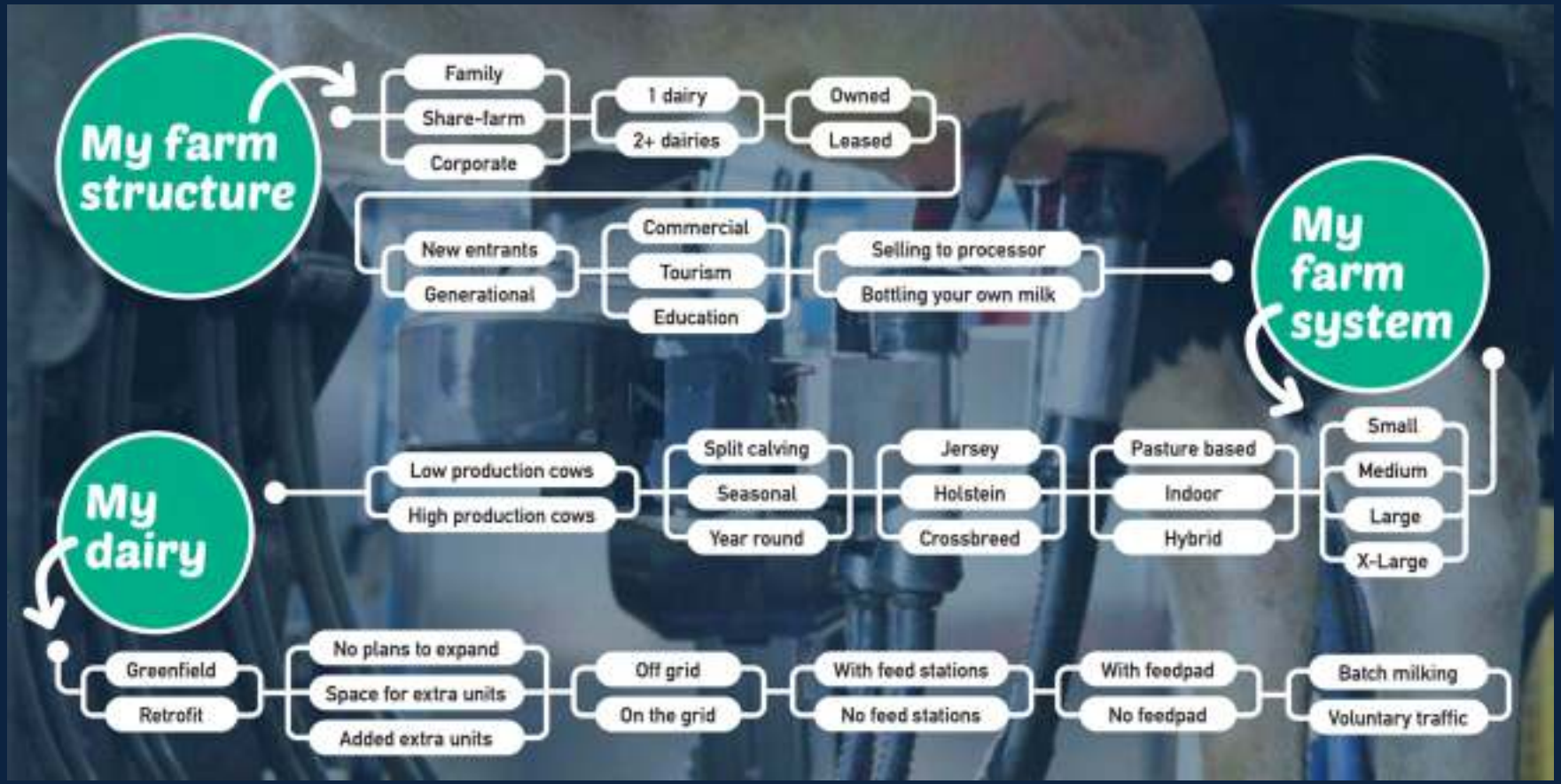
milking | edge

OPPORTUNITIES:

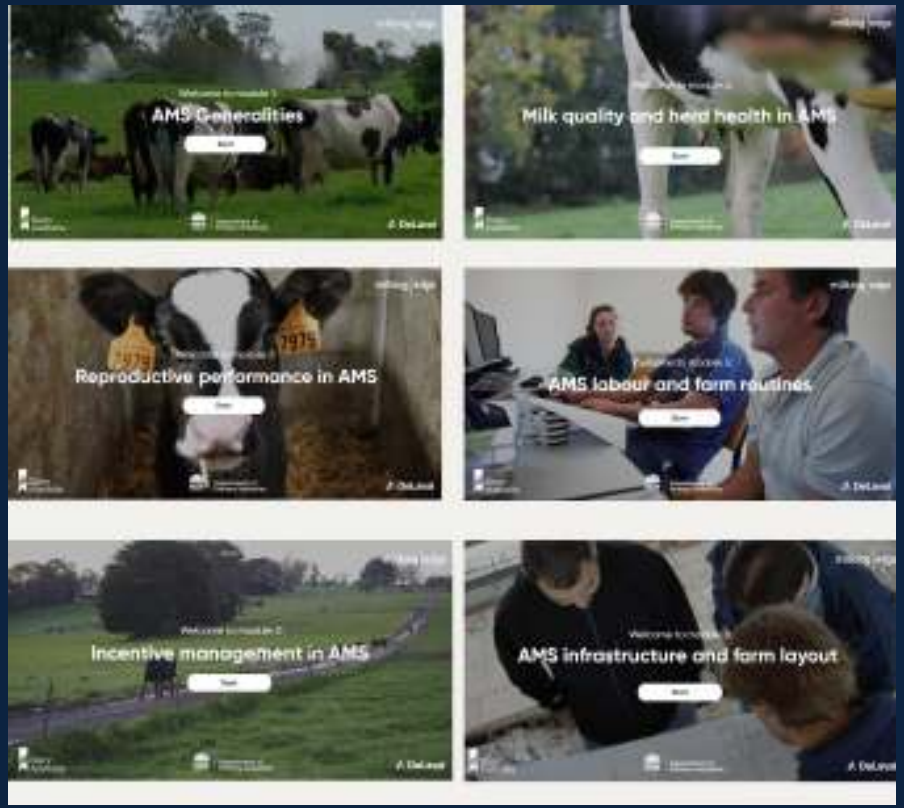
Data
Management
Individual treatment
Alternative sources of energy
Infrastructure
Working routines and conditions

CHALLENGES:

Expectations (adaptation)
Farm layout
Skills / Management
Training of cows (and people!)
On call
Services and support


My farm structure
Family
Share-farm
Corporate
1 dairy
2+ dairies
Owned
Leased
New entrants
Generational
Commercial
Tourism
Education
Selling to processor
Bottling your own milk
My farm system
Small
Medium
Large
X-Large
Pasture based
Indoor
Hybrid
Jersey
Holstein
Crossbreed
Split calving
Seasonal
Year round
Low production cows
High production cows
My dairy
Greenfield
Retrofit
No plans to expand
Space for extra units
Added extra units
Off grid
On the grid
With feed stations
No feed stations
With feedpad
No feedpad
Batch milking
Voluntary traffic

MILKING EDGE AMS TRAINING COURSE



- Run over 10 weeks
- Based on the 8 online AMS information modules
- Blended delivery
- Q&A with experts
- Option for practical experiences

For more information contact Jessica Bell
jessica.bell@dpi.nsw.gov.au

milking edge
THANK YOU
Dairy Australia
NSW
Department of Primary Industries
DeLaval

milking | edge

QUESTIONS

Nicolas Lyons
Project Leader Milking Edge
Leader Dairy, NSW DPI
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Regenerative Ag – what's in a name and how does it fit with dairy

Lorraine Gordon
Director Strategic Projects
Regenerative Agriculture Alliance

BESTON GLOBAL FOOD COMPANY

Alltech LIENERT

DairySA

Dairy Australia

Southern Cross University

Lorraine Gordon

Director, Strategic Projects

Director, Farming Together Program

Founder, National Regenerative Ag Alliance

RegenerativeAg ALLIANCE

Resilience through farming together

October 2020

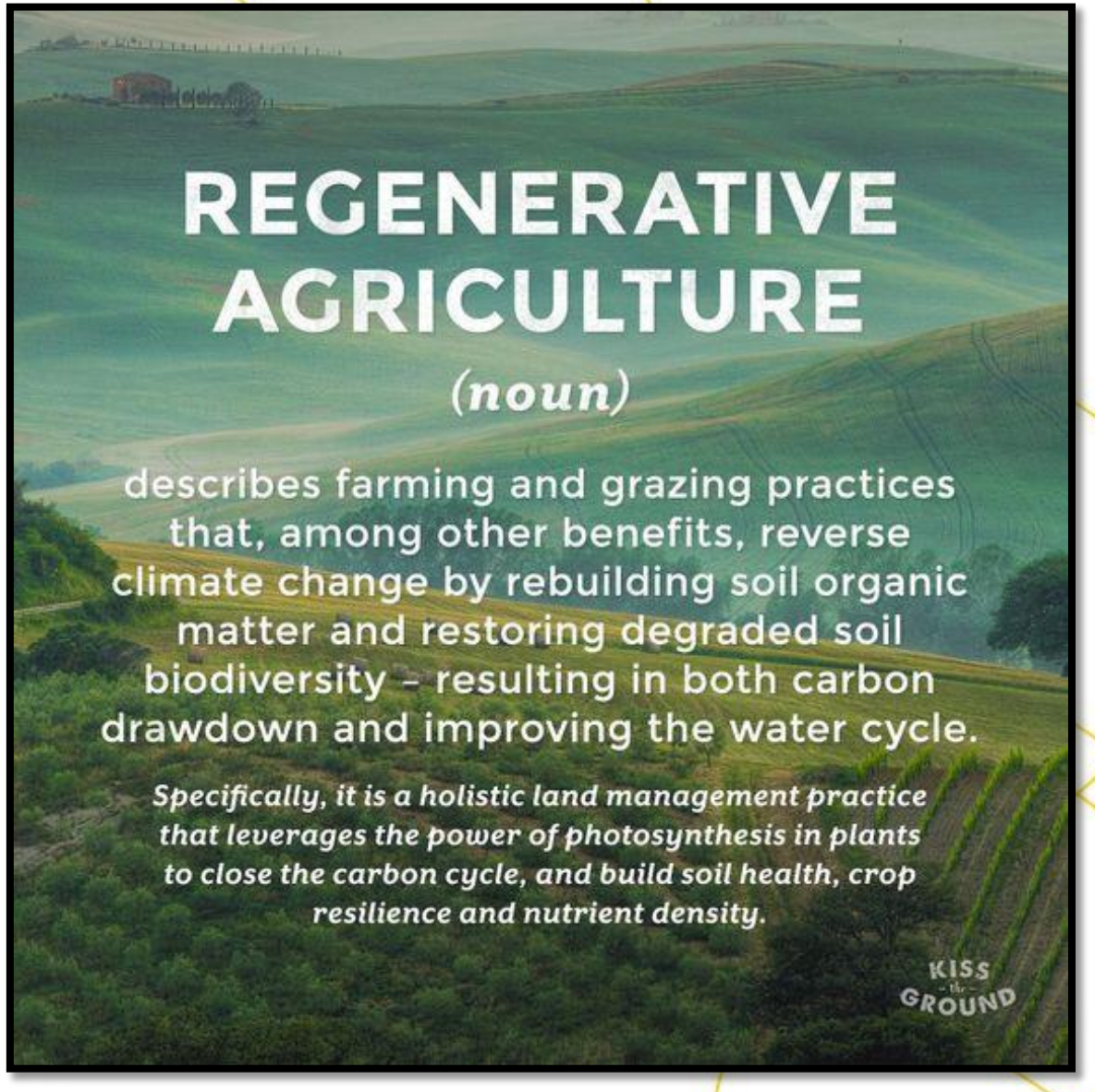
What is Regenerative Agriculture?

"Regenerative Agriculture is a system of farming principles and practices that increases biodiversity, enriches soils, improves watersheds and enhances eco-system services".

Terra Genesis International

A system of farming principles and practices focused on improving soil health. *Gosnell et al.2019*

"Leaving the environment and our landscapes in a better state than we found it!" *Lorraine Gordon 2020*



Regenerative agriculture

Regeneration is in part a self-organising quality inherent in nature, which many practices consciously or unconsciously encourage. This is a quality where every living system has inherent within it the possibility to move to new levels of order, differentiation and organisation. Whilst sustainable systems must maintain productivity, regenerative systems go a step further in restoring what has been lost and improving what is currently there.

Regenerative agriculture has emerged as an umbrella term for any agricultural activity that restores and enhances holistic, resilient systems. It can include many old and new practices. An agricultural practice is not regenerative when it discourages the evolutionary and self-organising potential of a living system.

Ethan Gordon 2020

Gordon Principles of Regenerative Agriculture

Southern Cross University

1. Think holistically
2. Think ecologically and understand complex, adaptive systems
3. Be comfortable in ambiguity
4. Have the capacity for continuous, transformative learning
5. Make place-based decisions, within bio-regions
6. Understand that human cultures are co-evolving with their environments
7. Acknowledge and involve diverse ways of knowing and being in landscapes
8. Participate in cultural and ecological reconciliation

Gordon and Gordon 2020

Common regenerative farming practices

(NB: Not exclusive, constantly evolving, revisited as emerging research and practice becomes available)

INPUTS

- Applying organic composts, fertilisers and bio amendments
- Encouraging natural biological cycles and nutrient transfer
- Reducing or ceasing synthetic chemical inputs

GRAZING MANAGEMENT

- Implementing time-controlled planned grazing
- Using grazing management and animal impact as farm and ecosystem development tools
- Self herding and stress free stockman-ship

Common regenerative farming practices

Southern Cross University

BIODIVERSITY

- Managing for increasing species diversity
- Integrating enterprises
- Feral animal and noxious weeds control

WATER

- Constructing interventions in the landscape or waterways (such as leaky weirs) to slow the flow of water
- Fencing off waterways & implementing water reticulation for stock
- Rehydrating wetlands
- Investing in revegetation

Common regenerative farming practices

CROPPING

- Multi Species Pasture cropping
- Pasture sowing
- Changing crop rotations
- Incorporating green manure or under-sowing of legumes
- Retaining stubble or performing biological stubble breakdown
- No Kill and Cover Cropping
- Controlled Traffic Farming

What doesn’t constitute Regenerative Agriculture

- Paddocks of bare soil/lack of ground cover
- Monocrops/lack of biodiversity
- Spraying out paddocks prior to sowing new pastures or crops
- Set stocking
- Overuse of synthetic chemicals, fertilisers and pesticides
- Over-tillage/disturbance of soil

My PhD with UNE

‘A longitudinal study looking at the resilience of regenerative beef cattle grazing systems in Northern NSW’.

Aims of the Research

- What practices and management decisions were made to survive the drought? How does regenerative grazing practices assist farmers to be financially resilient in a changing climate with drought conditions?
- Do regenerative grazing practices deliver long term environmental resilience?
- Do regenerative practices assist farmers to be more mentally and physically resilient?

What are we finding…… Profitability

Southern Cross University

What are the key profit drivers vs conventional livestock?

1. Less Overheads and Variable costs
2. Water retention
3. More consistent returns
4. Carbon farming – soil health and soil carbon is improved
5. Consumers choosing
6. Less dark cutters
7. Hoping off the spiral of more and more inputs
8. Asset value through natural capital accounting is increased
9. Increased resilience/risk mitigation – more stable incomes over time
10. Higher biomass/groundcover across the year

What are we finding around farmers mental and physical resilience

- Higher levels of wellbeing
- More resilient
- More accepting of ambiguity/not knowing
- Less stress and anxiety
- Better physical health
- Better mental health

What are we finding around environmental outcomes

- Increase water retention from less rainfall
- Increased biodiversity
- Sustainable landscapes
- Increased soil organic matter resulting in increased soil organic carbon
- Increased biomass/groundcover

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SCU Educational Offerings

- ✓ **Bachelor of Science (Majoring in Regenerative Agriculture)**
- ✓ **Graduate Certificate in Regenerative Agriculture**
- ✓ **Graduate Certificate in Organic Food and Nutrition**

More coming…….

scu.edu.au/study-at-scu
1800 626 481

Southern Cross University

Regenerative Research @ SCU

Economic Values on Environmental Assets
Natural Capital Accounting
Co-Benefits Eco-systems services

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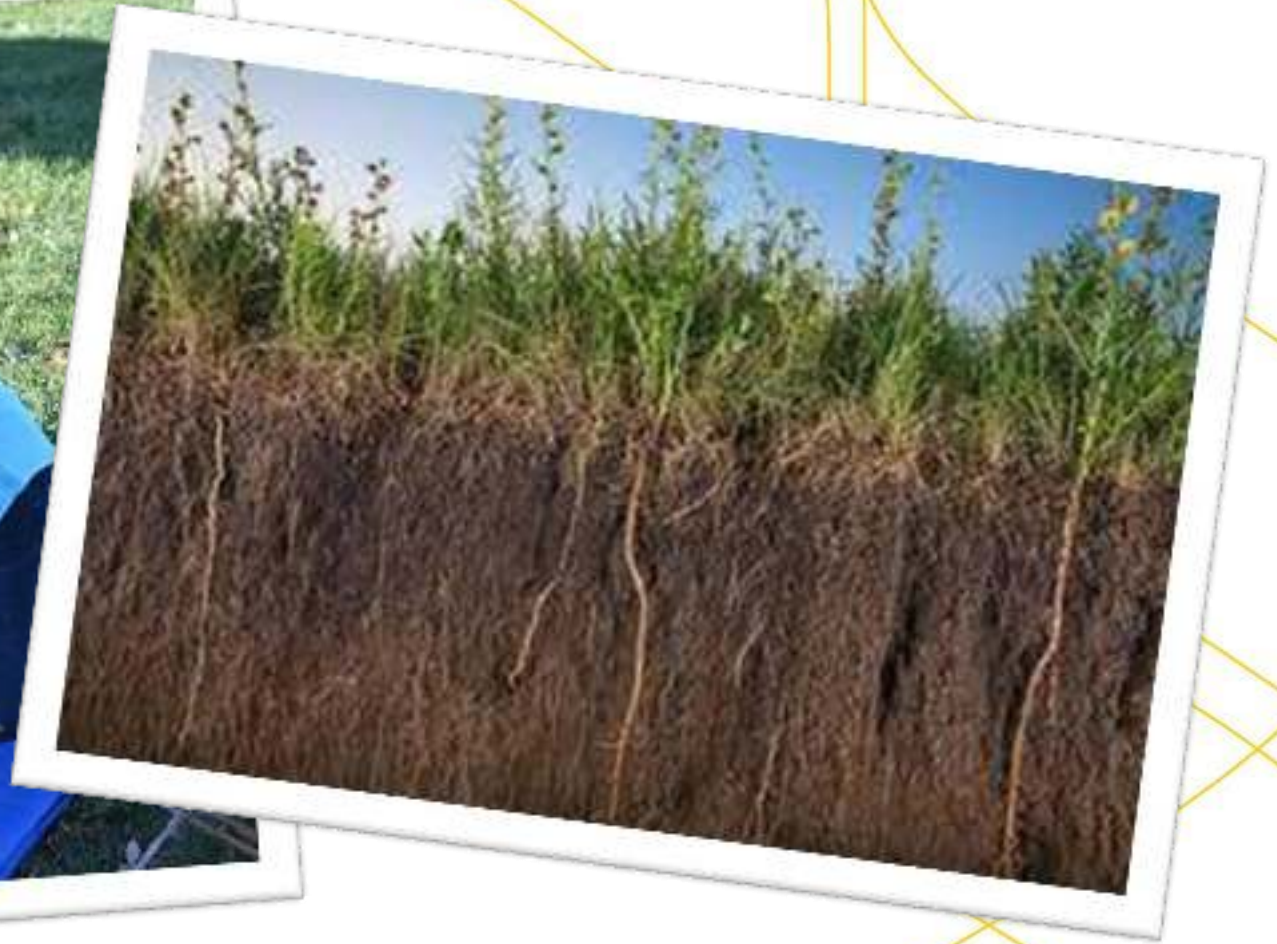
Multi species pasture cropping as a tool to increase soil carbon

Links between soil health, plant health, animal health and human health

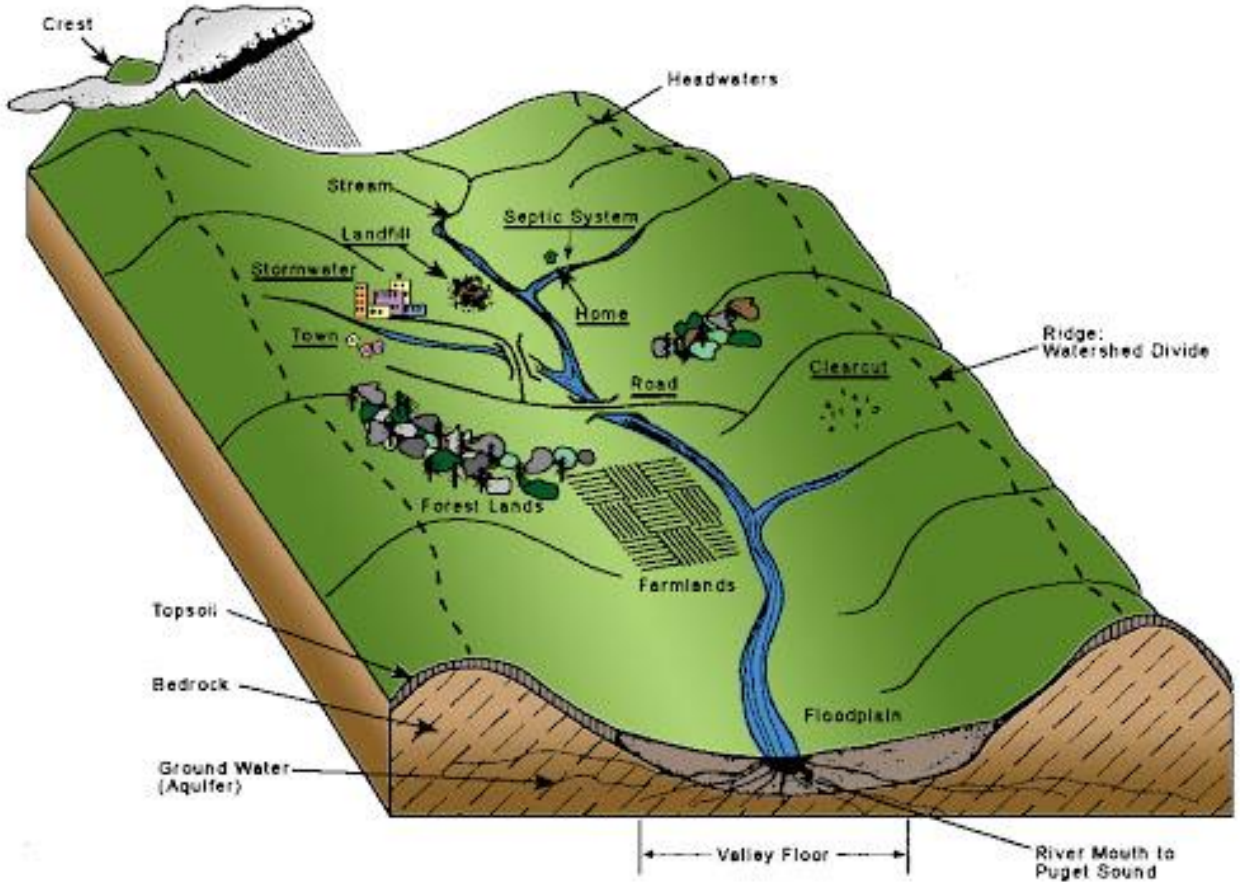
Carbon Farming | Carbon Sequestration

Southern Cross University



Biochar

Pesticide effects on microbial diversity



RegenerativeAg ALLIANCE
Resilience through farming together

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Some thoughts for next time?

- Carbon Farming and Trading – the next “Gold Rush” !!
- Collaborative Farming Models e.g.: Cooperatives
- Opportunities for family farms to become their own corporate model

RegenerativeAg ALLIANCE
Resilience through farming together

Southern Cross University

Thank You!
Questions?

Lorraine Gordon
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Program Director, Regenerative Agriculture Alliance
Program Director, Farming Together Program
Associate Director, Centre for Organics Research (COR)
Southern Cross University
T: (02) 66203489
E: raa@scu.edu.au
W: farmingtogether.com.au

Farm Smarter, Think Positive

Matt Reid & Paul Groves
Otway Milk ~ Groves Consulting

BESTON GLOBAL FOOD COMPANY

DeLaval

DairySA

Dairy Australia

otwaymilk

Otway Milk Background

- Entered via lease purchase of 232 ha 2003-06
- Property purchases in 2008, 2011, 2016 & 2021
- Balance sheet in 2006 14% equity
- Equity is the story of our business
- 425 cows 2003 -11 calving march - august
- 750 cows 2011 – 16 calving march - august
- Jersey cross cows dominated the herd

otwaymilk

Current business snapshot

- Area 596ha usable, 305ha milking platform
- Cows 675
- 4 X calving since 2016 calving March, June, Sept and December
- Full fixed time AI – no herd bulls
- 5 full time staff
- 70% home grown feed
- Sexed semen over heifers

otwaymilk

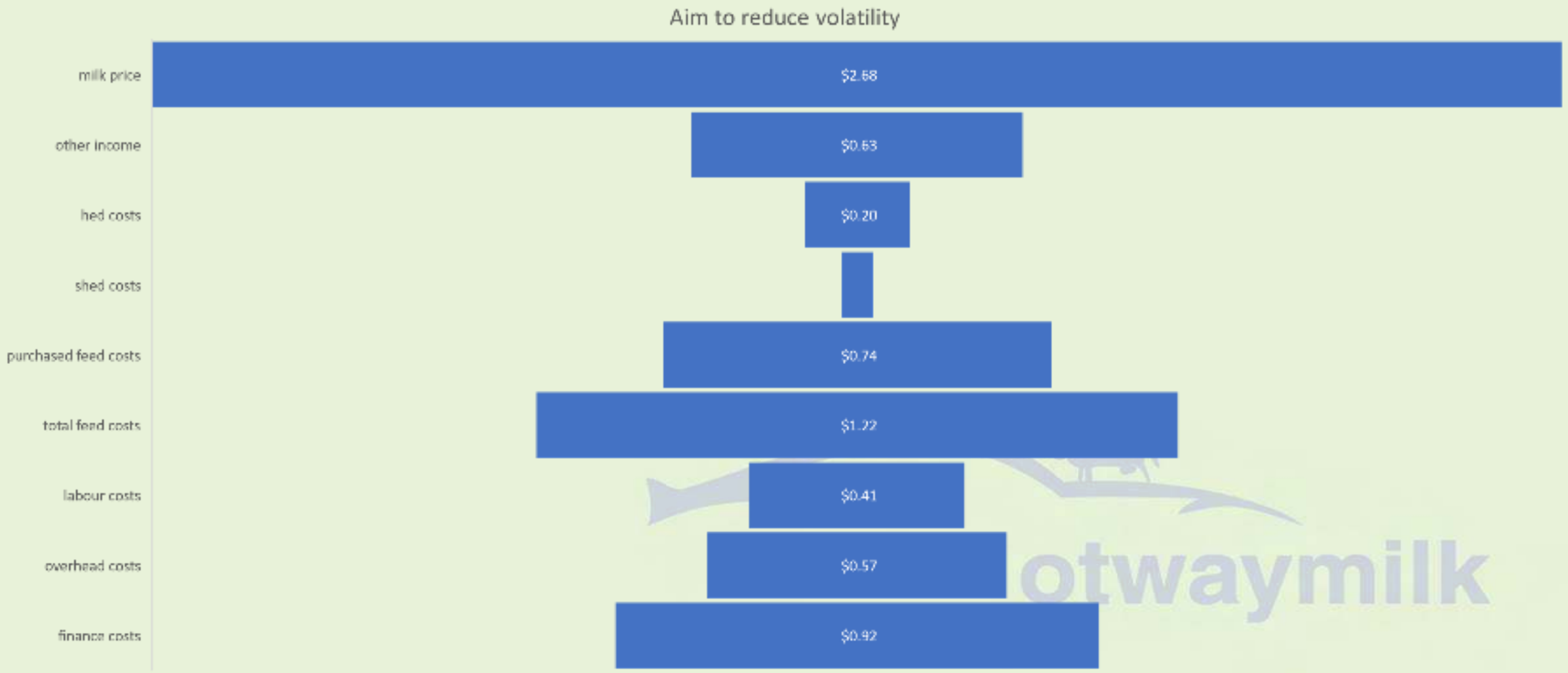
Our reality

With a 14% equity start we need to…….

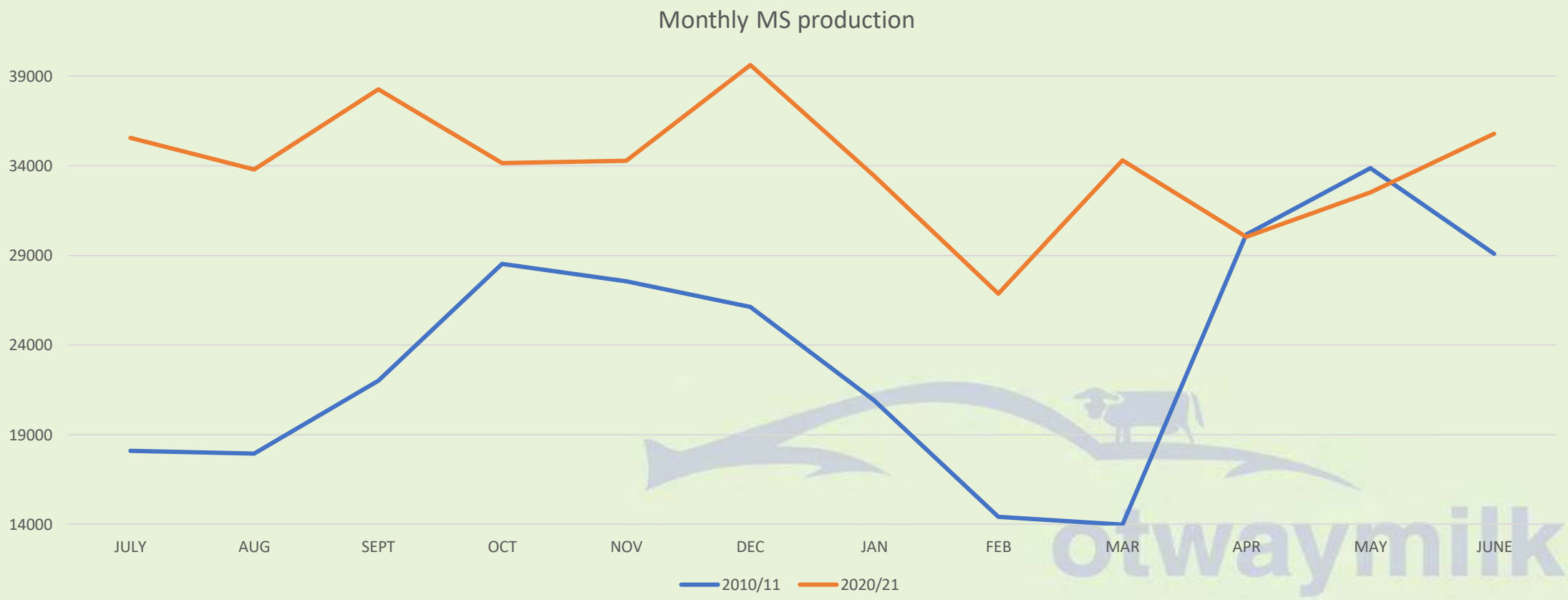
- run a very efficient business, we have higher finance, principal commitments than most businesses
- Surround ourselves with good people – fill the knowledge gaps
- Manage risk at all times
- Maximise profit always or when we can

otwaymilk

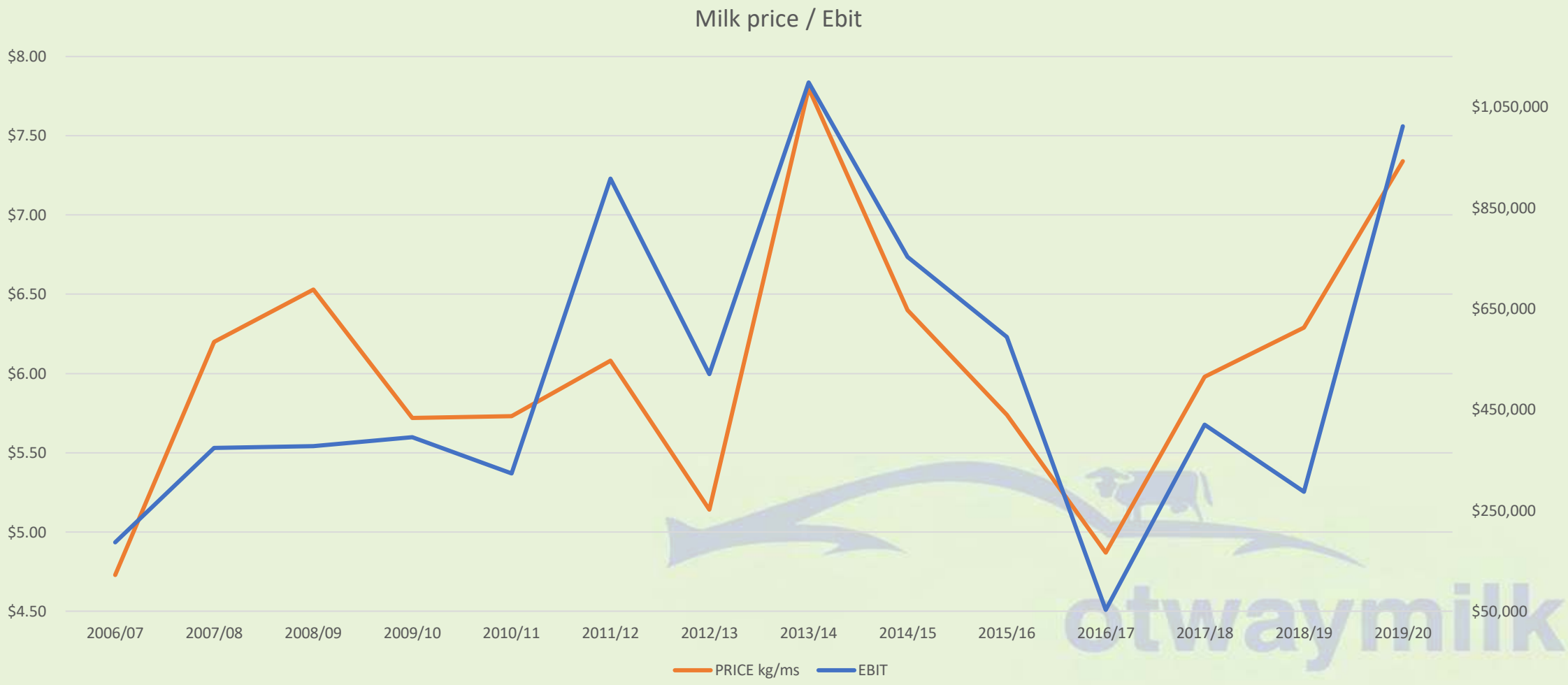
Risks


Aim to reduce volatility
milk price
$2.68
other income
$0.63
hed costs
$0.20
shed costs
purchased feed costs
$0.74
total feed costs
$1.22
labour costs
$0.41
overhead costs
$0.57
finance costs
$0.92

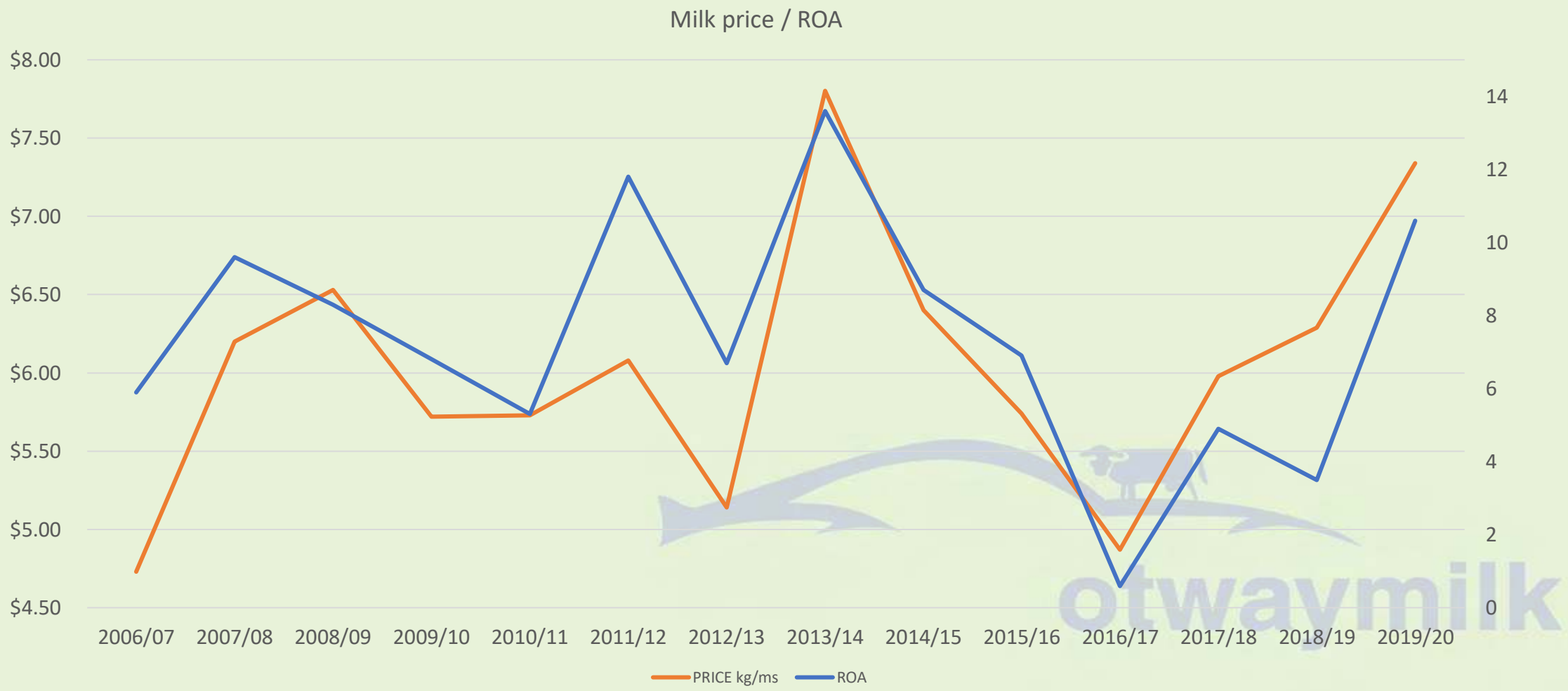
Graph of milk supply



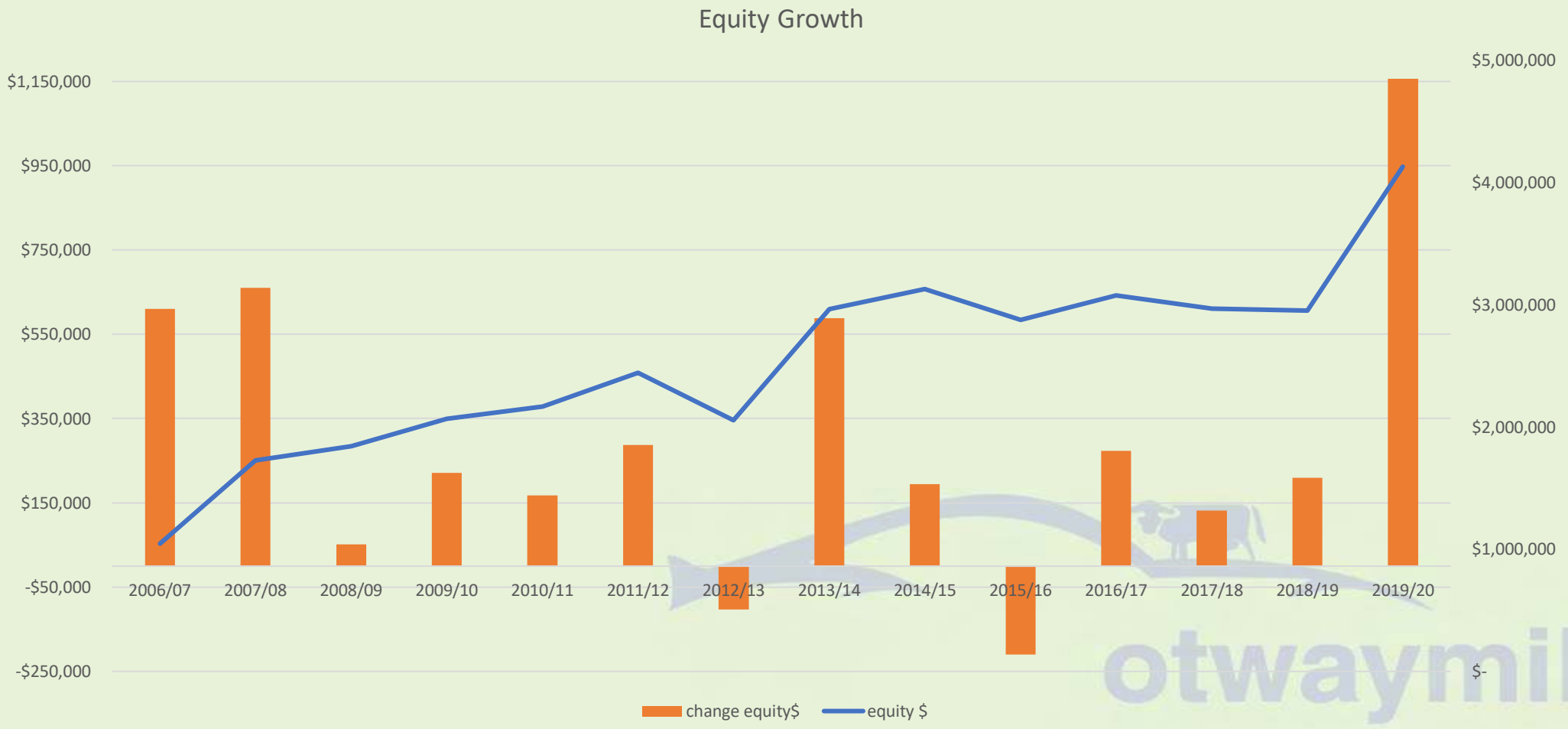
Important to control costs



Milk price variation and its effect on ROA



Equity growth has its ups and downs…



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3 Priority areas

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Priority

- Staff development and safety

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Priority

- Work Life Balance us and employees

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Priority

- Equity Growth

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Dairy is great

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