Introduction to FarmIQ UNIDO Indian Study Tour

Presented by:

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FARM**IQ**®

Presentation

- Why and what of Farm^{IQ}?
  - International trends
  - Information hub and platform

- FarmIQ for dairy farmers
  - Planning
  - Land
  - Animals and Feeding
  - Staff and H&S
  - Inventory
  - Compliance
  - Energy saving
  - Dairy reporting

- Sri Lankan Project
  - History
  - Where we are at today

FARM IQ®

Farming is in the cross hairs of the fourth industrial revolution

(where digital technologies disrupt biological systems)

Consumers demand farm to fork traceability and a digital supply chain
- Fonterra rolls out digital dairy diary, Silver Fern Farms uses Oritain to prove source of origin
- Blockchain drives consumer expectations – and farmers own the data
- Real time and remote access to farm compliance data transforms integrity of digital supply chains

Farming moves from productivity to sustainability focus
- Nitrogen caps reduce farm values and you increasingly need a consent to farm
- PM commits NZ to zero carbon, and the government gets serious about biosecurity
- Farmers, regulators and consumers demand transparency on environmental measures

Increasing compliance on multiple fronts reaches a digital tipping point
- Increasing compliance on multiple fronts - H&S, minimum wages, market access, water quality , animal welfare, biosecurity and now greenhouse gas
- The compliance burden stretches the capabilities of paper based systems

Hardware gets more powerful every year and data explodes
- Smartphones get more powerful every year
- IoT devices get cheaper and more abundant
- Farming data grows exponentially and is looking for a home

Farming gets corporatized
- Farms get rolled up as ageing farmers retire
- Private equity looks for a safe haven in a hungry world – and invests in farms and agri-tech
- High capital costs demand efficiencies that come from scale and reporting to off – farm managers

Agriculture needs an information platform
- Artificial Intelligence will optimise farming systems – but only if the data is in one place
- The Internet of Things is coming to agriculture – but cheap devices need to send information somewhere
- Agri-business are digitising their offerings with stand alone apps – that don't talk to each other

Farmers want all their information in one place!

Farm^IQ is the information hub on a farm
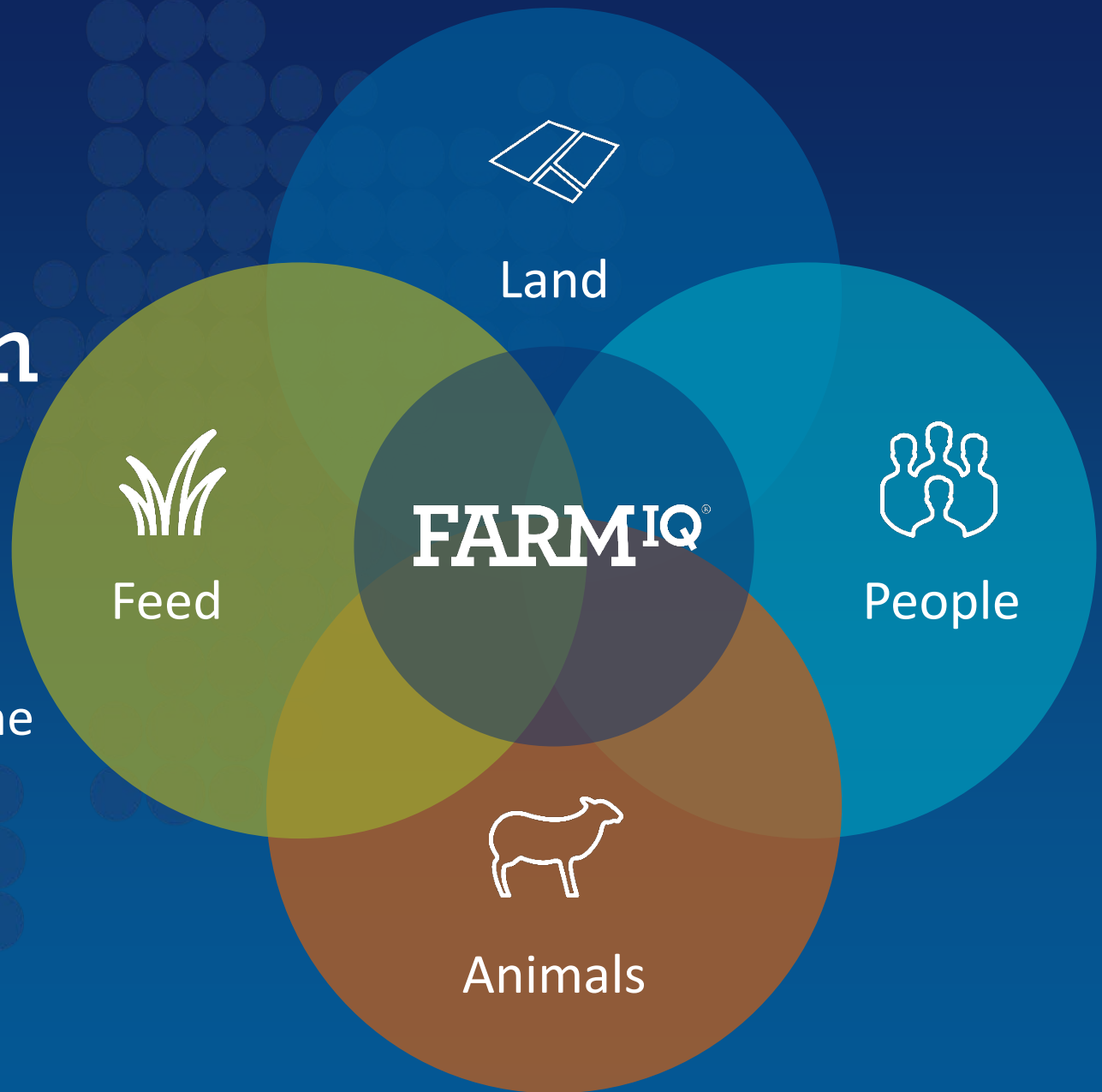
➤ World-class software on the back of $25M investment

➤ Market-leading farm management system

➤ Uptake growing at 80% pa

Land

Feed

FARM^IQ®

People

Animals

Farm^{IQ} is a neutral, open information platform

➢ Connecting farmers and their partners to the world's most discerning customers.

Measuring devices

Farm advisors

Farm suppliers

Farmers

Farm^{IQ} information platform

Processors

Consumers

FARM^{IQ}®

Farm^IQ anticipated the global need for transparency in primary production

Farm^IQ is well placed to deliver:

➢ Dairy assurance re-imagined
➢ A pan-sector view in NZ
➢ National infrastructure in Sri Lanka
➢ Connected value chains in Australia
➢ NZ export returns

Dairy

Sri Lanka

New Zealand
Red meat

Australia

FARM^IQ®

FarmIQ for dairy

Everyday

A generic starter pack

Enterprise Dairy

NZ's most comprehensive dairy farm management system

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Plan and connect

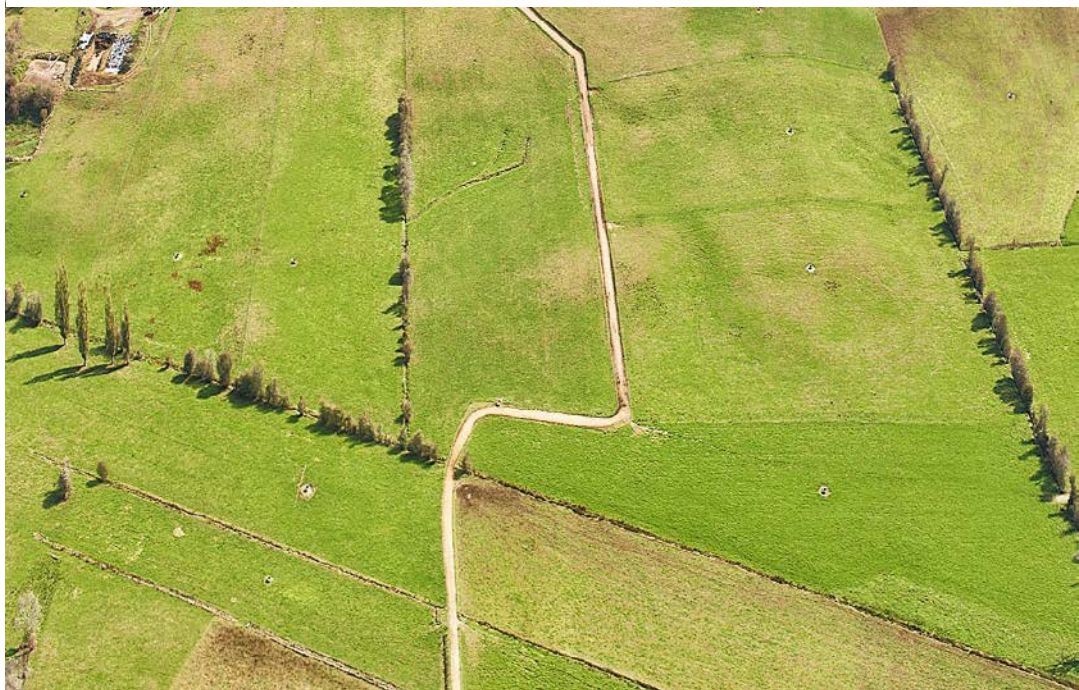Tools to help farmers think ahead - weekly, monthly and seasonally.

FARM IQ®

FARM OWNERS

FARM WORKER

FARM MANAGERS

CORPORATE OWNERS

FARM ADMINISTRATORS

RURAL PROFESSIONALS
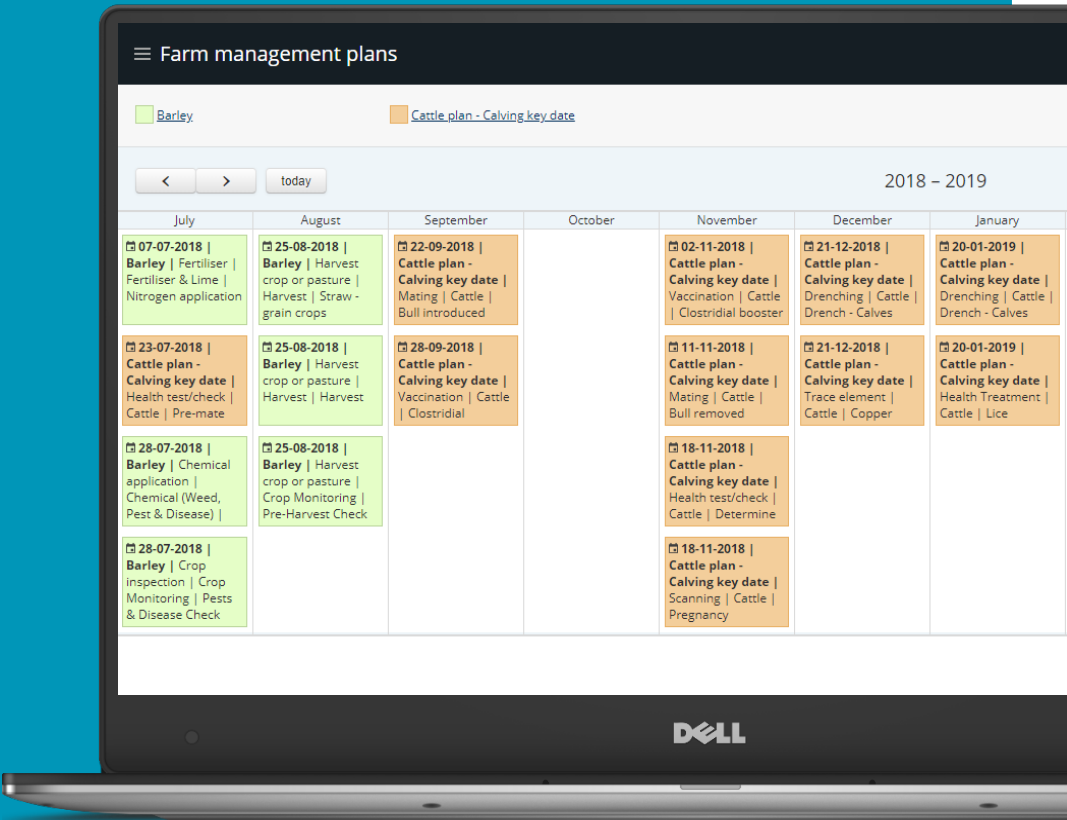
Connects people across your business

Helping farmers collaborate and share information and plans with the people most important to them.

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Land

Tools to help unlock the value of land in a long-term, sustainable way.

- Mapping

- Paddock history for fertiliser, chemicals, irrigation, cropping and soil

- Suite of reports, including grazing days, soil tests & nutrient analysis

- Develop land schedule and share with contractors & third parties

- Create a Farm Environment Plan

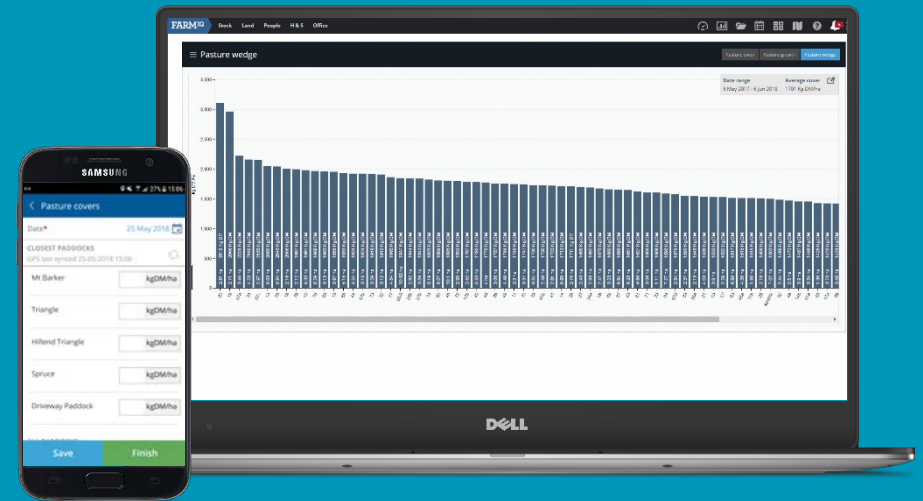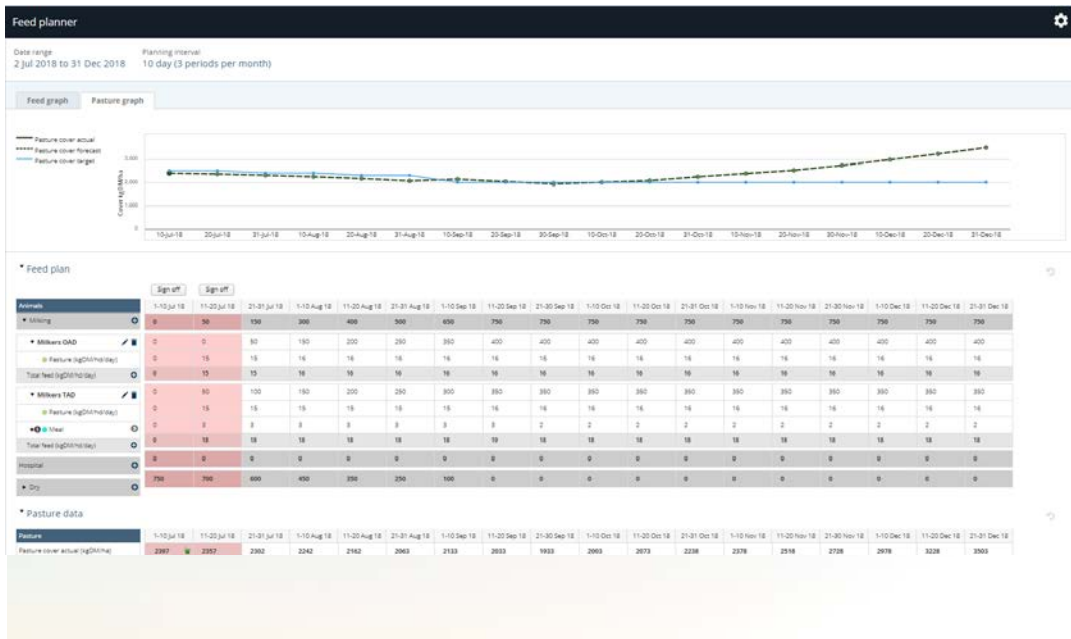- Integrates with C-Dax and other suppliers

FARM IQ®
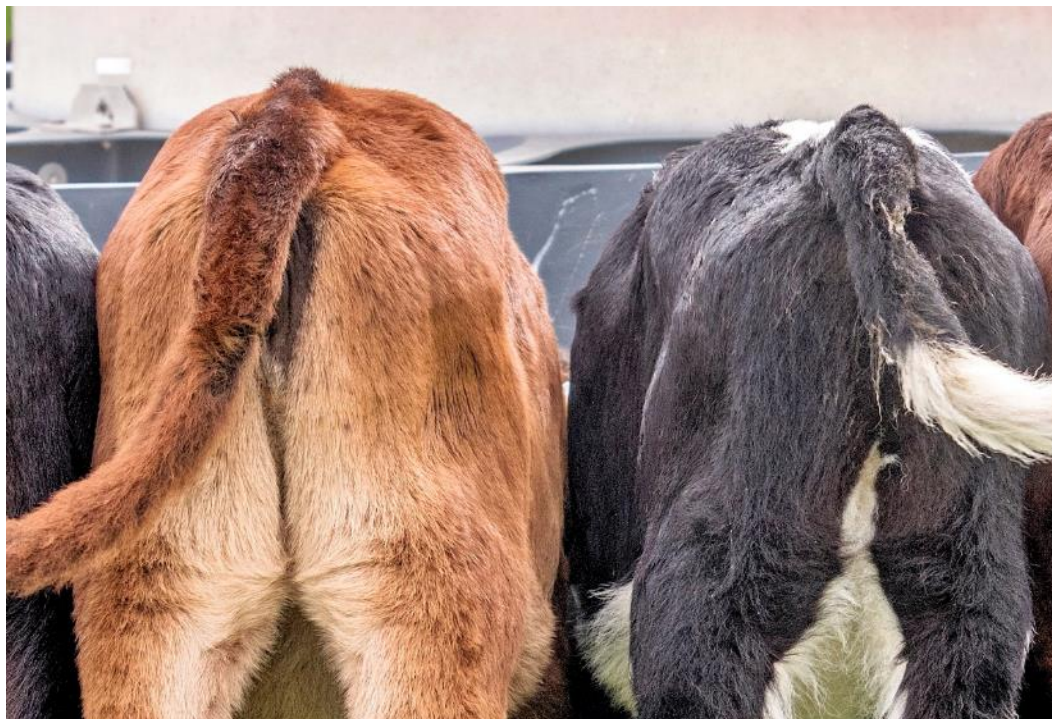
Animals
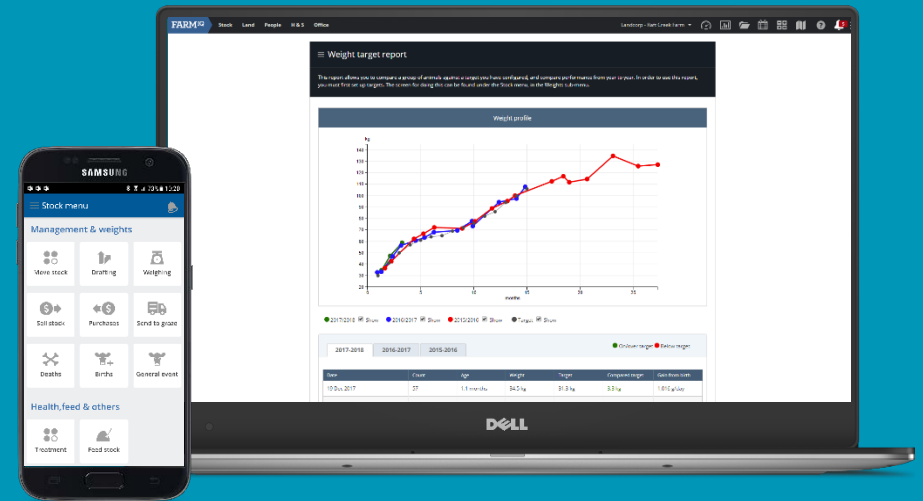
Tools to help farmers manage stock performance.

- Recording of animal information by EID or by mob. Maintain accurate stock recs

- Record weights, condition scores, health treatments

- Develop & manage animal health plans

- Integrates with Gallagher, Tru-Test, Te Pari weigh scales and farm equipment

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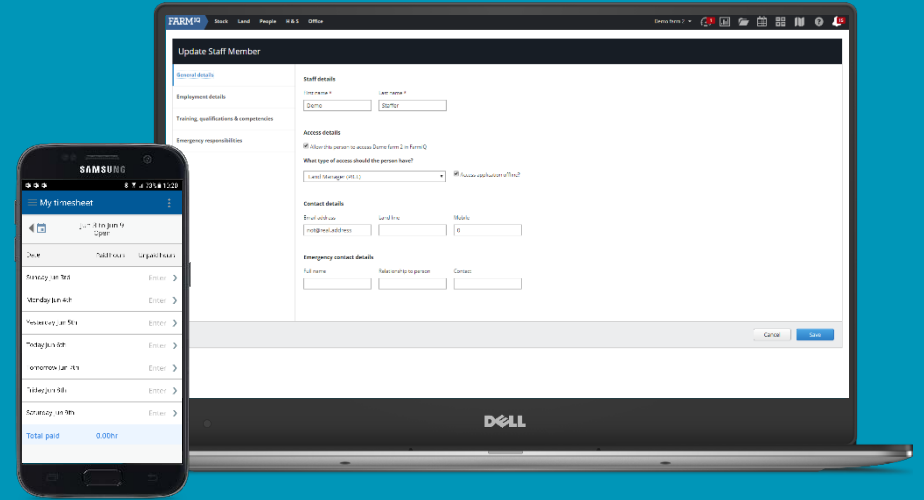# Pastures & Feed
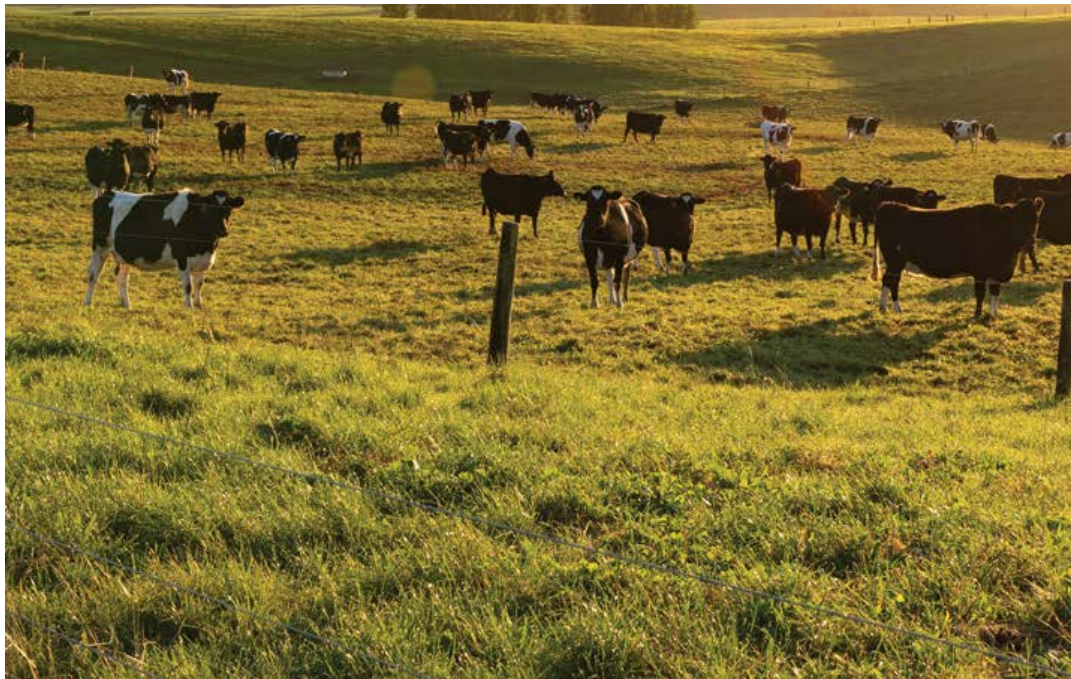
Tools to help farmers optimise feed and drive animal production.

- Feed planner and budget

- Reports of :
    - Pasture growth,
    - Pasture production
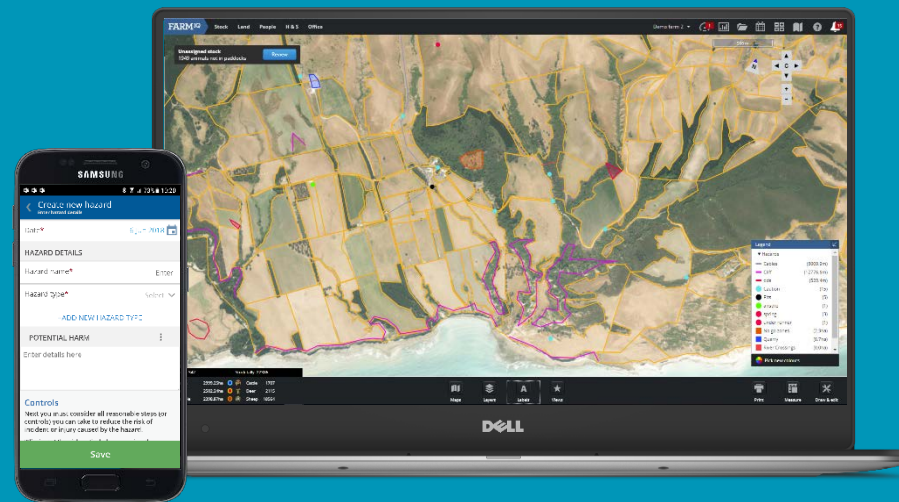   - Covers and feed wedge

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Staff

Tools to help farmers get the right thing done at the right time.

- Timesheets and rostering

- Task management & collaboration

- Enable third-party access for contractors, TFOs, RPs, vets

- Compliance with IRD Hours of Service legislation

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Health & Safety

Tools to help farmers keep staff and visitors safe, healthy and informed.

- Record & manage hazards

- Set up emergency procedures

- Manage visitor and contractor induction

- Team meetings and notes

- Visitor management

- Incidents and safety management

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Inventory
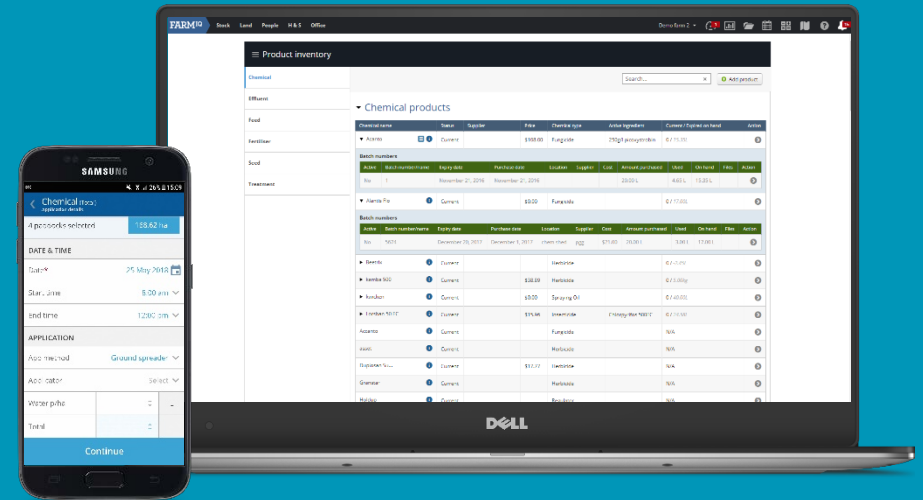
Tools to keep track of supplies as they are added, stored and used on the farm.

- Maintain records of chemical, effluent, feed, fertiliser, seed and health treatments

- Track expiry dates, batch numbers, produce withholding periods

- Automated depletion of stock against tasks, maintaining accurate running tally
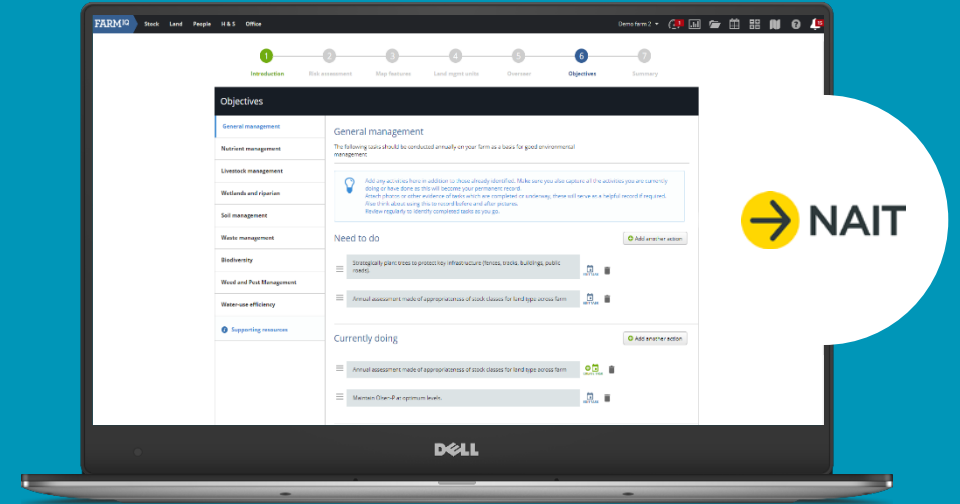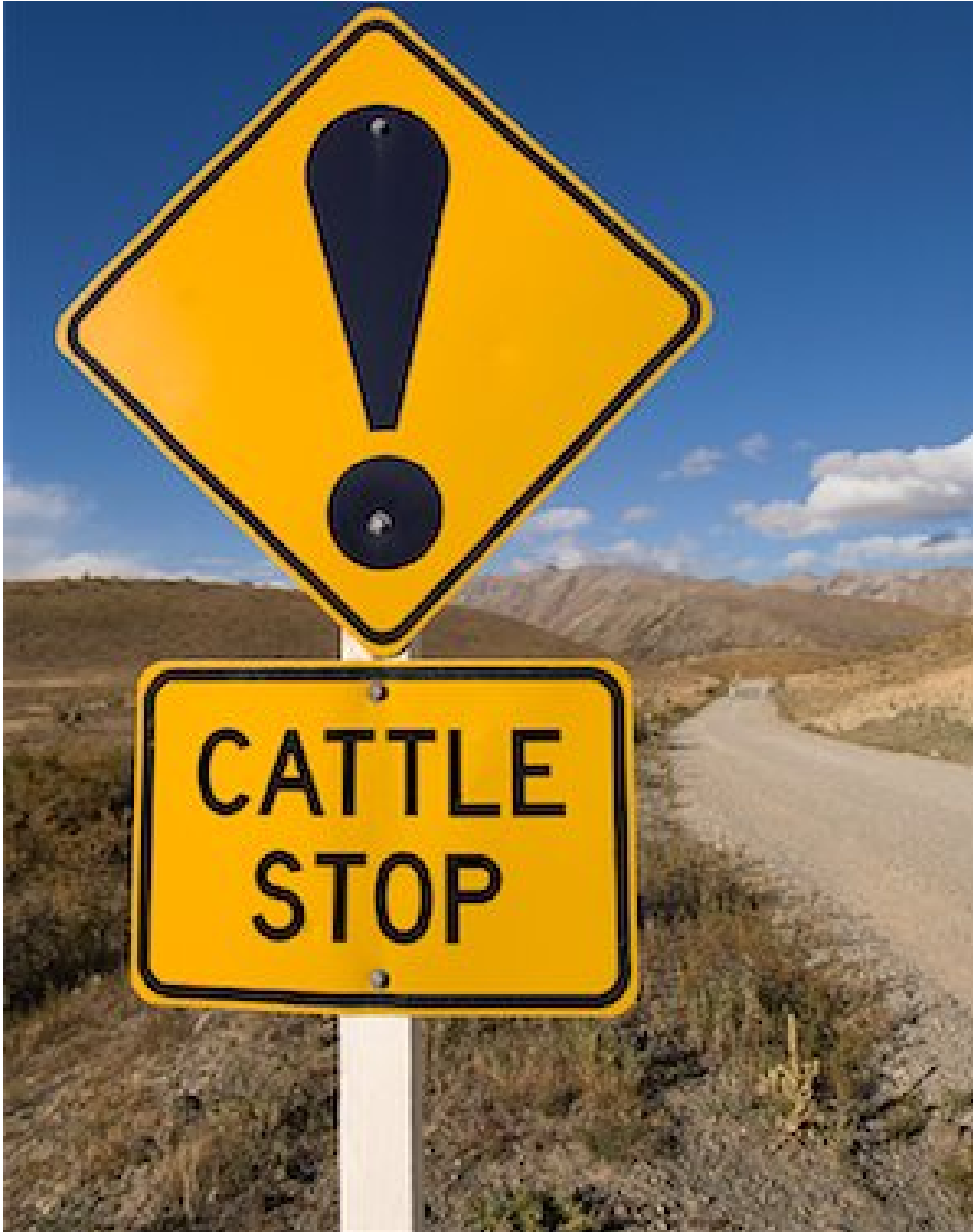
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Compliance

Tools to make farm compliance simple and painless.

- Automated NAIT compliance

- Farm Environment Plans (Regionalised)

- Dairy Diary (Synlait only)

- Health & Safety

- IRD - hours of service

- Inventory management / expiry

→ NAIT

FARM IQ ®

Dairy Energy Efficiency

Typical breakdown of dairy shed energy costs

- 42% Milk cooling
- 21% Milk harvesting
- 9% Cleaning & effluent
- 3% Feed
- 9% Stockwater
- 4% Shed & lights
- 17% Hot water

FARM IQ®
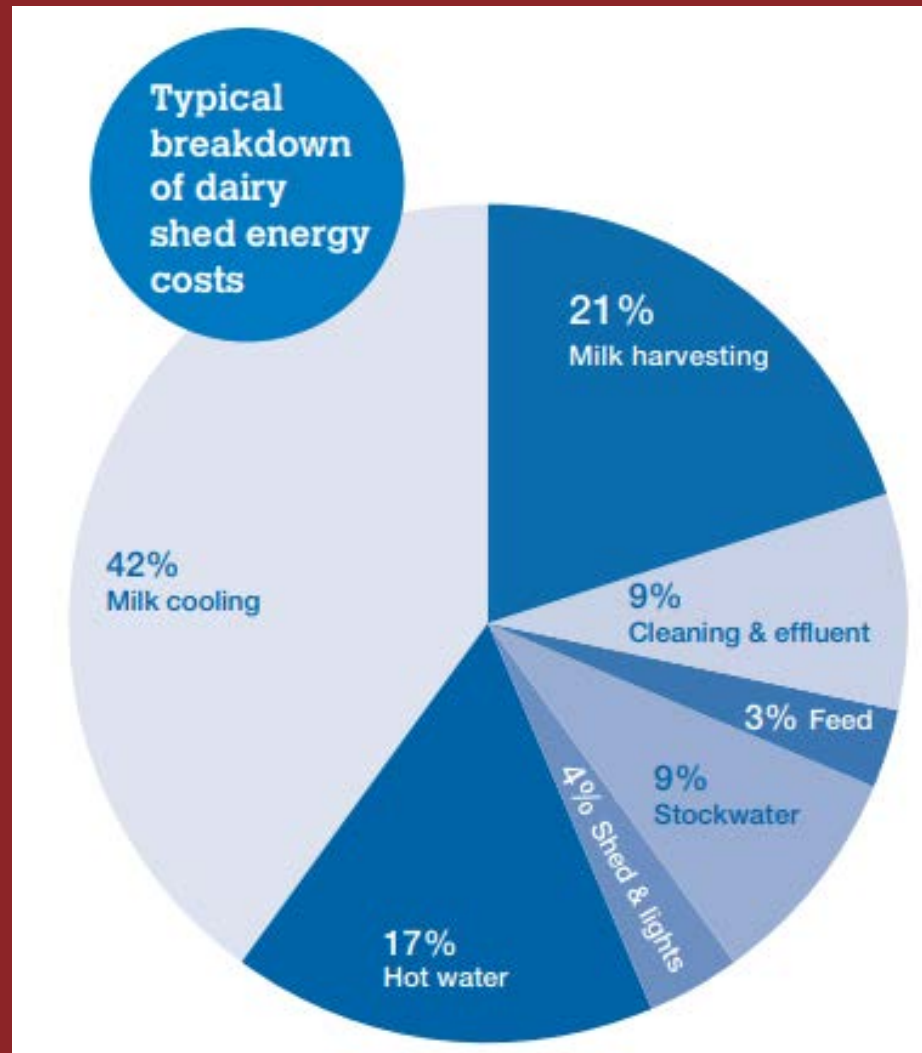
Dairy Energy Efficiency

- Dairy Shed
  - Heat Recovery from milk cooling
  - Water chilling
  - Vary speed vacuum pumps
  - Insulation
  - Solar water heating
  - Photo voltaic cells – electricity
  - Wind energy

- Dairy effluent
  - Grey water re-use
  - Effluent bio-digester

- Farm
  - Smart irrigation – right amount, right place
  - Vary speed pumps
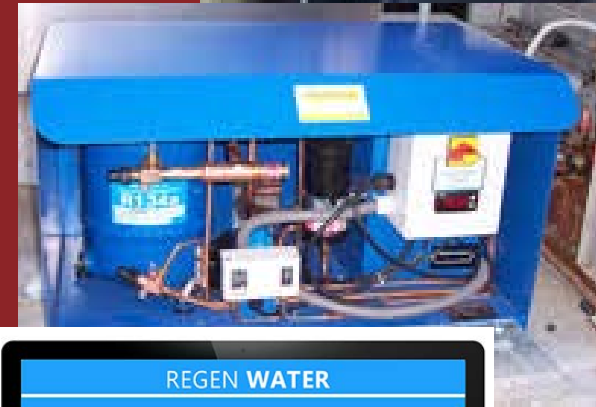
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Dairy reporting

Dashboard view makes farm performance easy to track and share

Energy add-ins, measure and monitor what matters
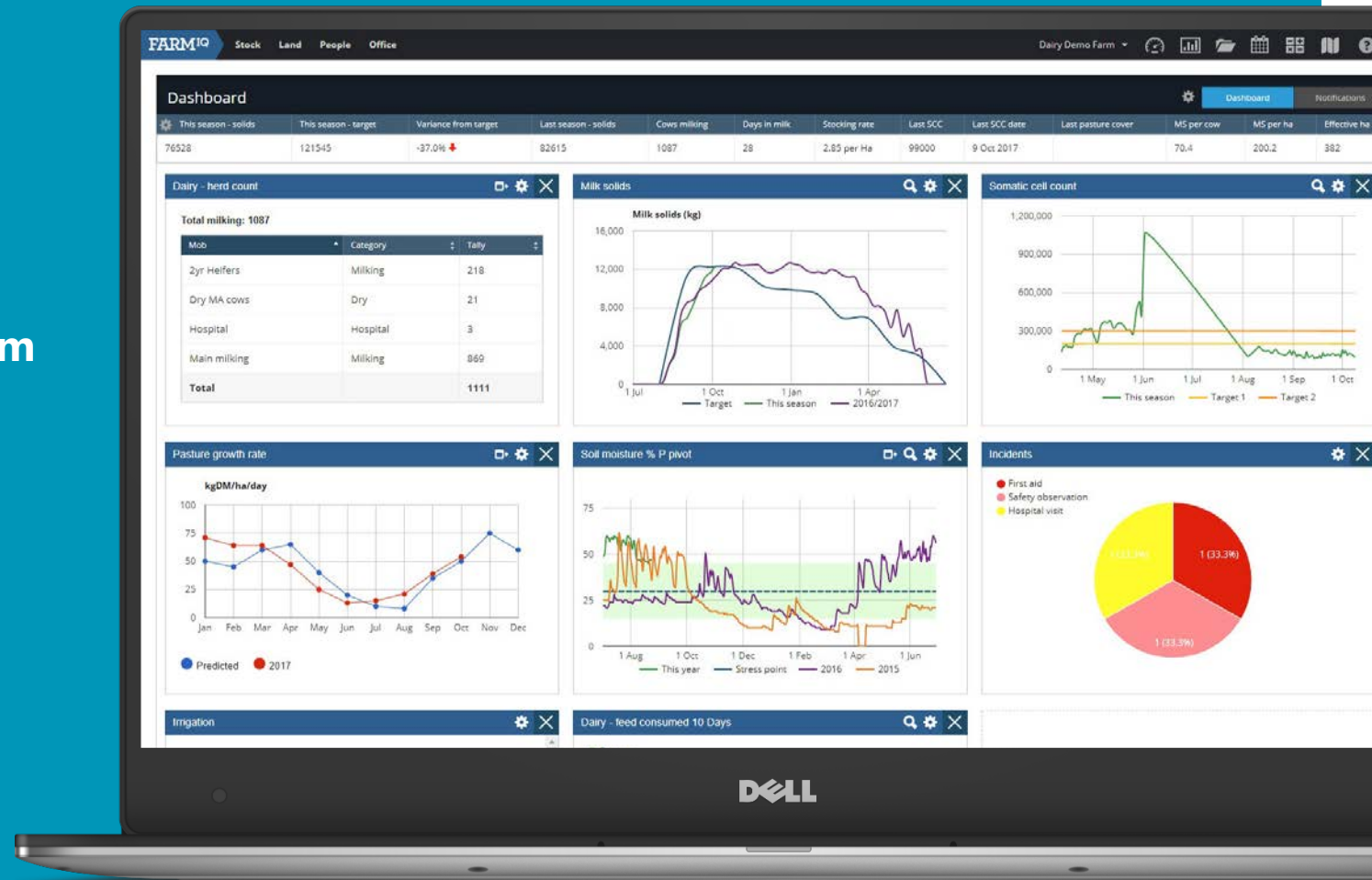
FarmIQ for dairy

Sri Lanka

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Agriculture Sector Modernization Project for Sri Lanka

Achieve the following objectives:

- ➤ increasing agriculture productivity,
- ➤ improving market access, and
- ➤ enhancing value addition of smallholder farmers and agribusinesses

Through:

1) Agriculture Value Chain Development:

(i) investment preparation support;
(ii) matching grants to farmer producer organizations and agribusinesses; and
(iii) partial credit guarantee.

2) Productivity Enhancement and Diversification Demonstrations:

(i) farmer training and capacity building;
(ii) modern agriculture technology parks;
(iii) production and market infrastructure; and
(iv) analytical and policy advisory support.

3) Project Management, Monitoring and Evaluation,

ACKNOWLEDGEMENTS

Nathan Guy

1 OCTOBER, 2016

Guy welcomes Sri Lankan FarmIQ pilot

Primary Industries Minister Nathan Guy has welcomed the announcement of a FarmIQ technology pilot in Sri Lanka.

The pilot was part of a joint announcement by Prime Minister John Key and Sri Lankan Prime Minister Ranil Wickremesinghe today.

"The FarmIQ management system has been developed through the Primary Growth Partnership (PGP), and is cutting edge technology that can be applied to a range of farming activities," says Mr Guy.

"It works by capturing and analysing data throughout the value chain so farmers can better link on-farm practices to farm outputs and revenue.

"The Sri Lankan FarmIQ pilot will specifically measure the impact of dairy farm inputs and practices against milk output, quality and profitability, and will help support overall dairy sector development in Sri Lanka," says Mr Guy.

The joint initiative between New Zealand and Sri Lanka is another activity under the Dairy Cooperation Arrangement signed between the two countries and has been extended to 2018/19.

JOHN KEY WITH SRI LANKAN PM
RANIL WICKERAMASINGHE

New Zealand
➤ MPI
➤ MFAT
➤ NZTE

Sri Lanka
➤ Ministry for Rural Economic Affairs
➤ Department of Animal Health and Production

Self sufficiency in dairy

➢ **Monitor farm performance**

➢ **Identify intervention requirements**

➢ **Improve key drivers**

  ➢ **Breeding**

  ➢ **Feeding**

  ➢ **Herd composition**

FARM IQ

RECORDING ON ANY DEVICE
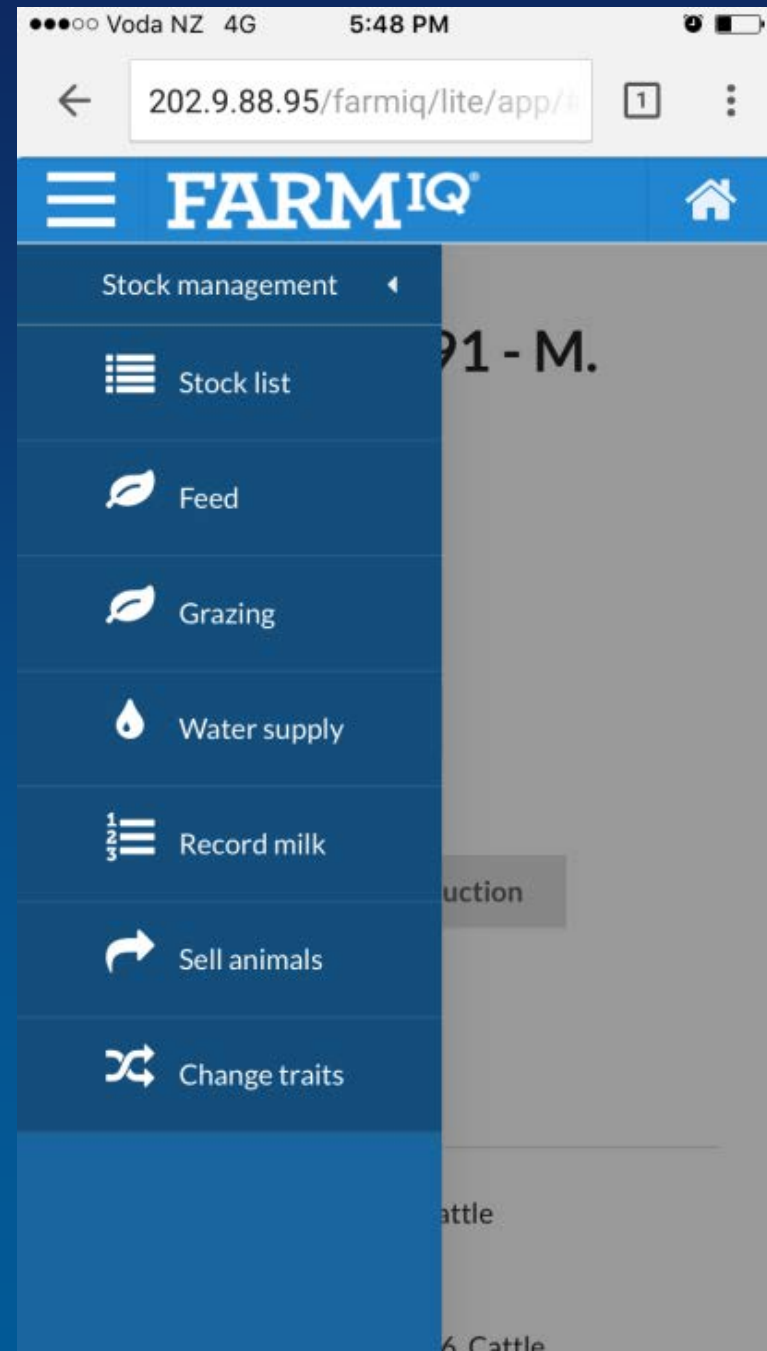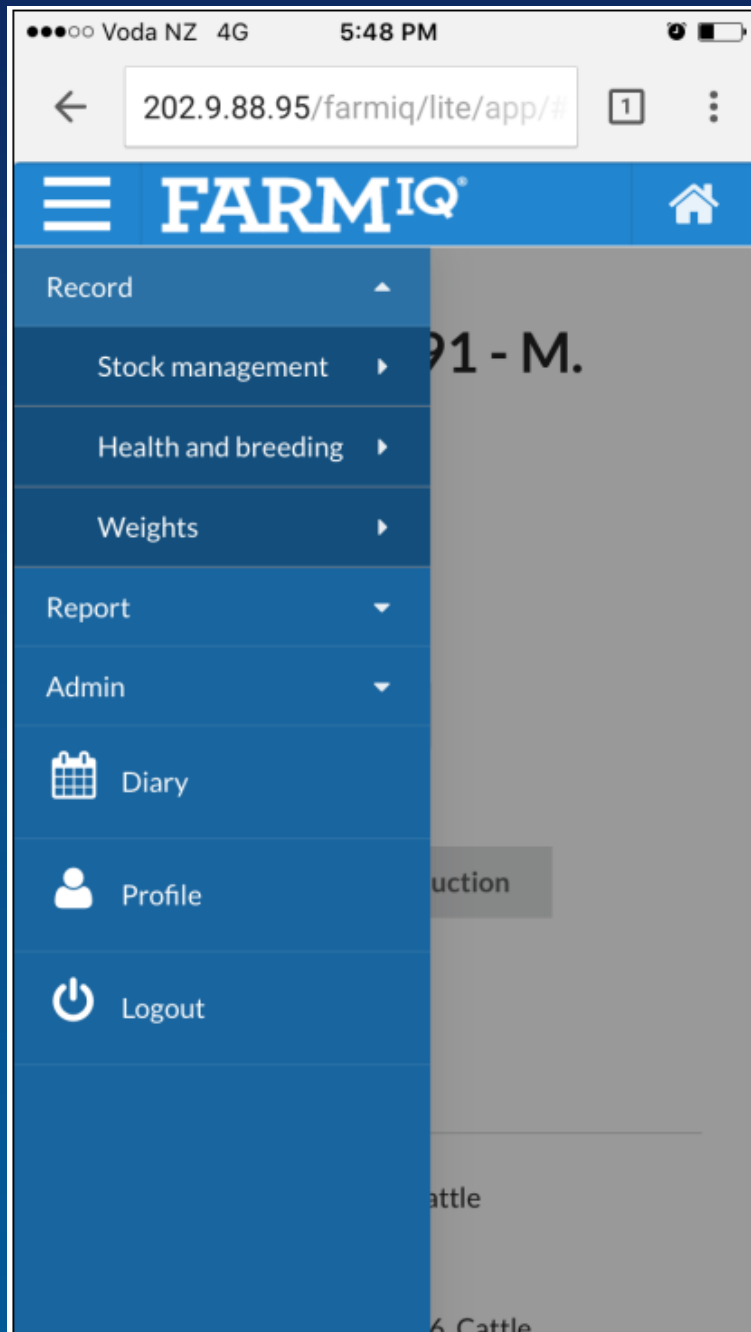
FARMIQ   Record ▾   Reports ▾   Admin ▾   📅 🏠 👤

Stock management
- ☰ Stock list
- 🌾 Feed
- 🌾 Grazing
- 💧 Water supply
- ☰ Record milk
- ↪ Sell animals
- ⤧ Change traits

Health & breeding
- ✔ Breeding
- ♀ Pregnancy diag.
- 🗎 Diseases
- 📷 Treatment

Weights
- ⅛ Cond. score
- 📈 Weights

Sub-division

REPORTING AT ANY LEVEL

Animal status for 21150391 - M. Demo

Reproduction status

Use milk volumes recorded...

| On farm | or | By milk society |

7	**3**	**1**	**0**	**0**	**2**	**0**	**1**
COWS	PREGNANT LACTATING	NON-PREGNANT LACTATING	PREGNANT NON-LACTATING	NON-PREGNANT NON-LACTATING	PREG. HEF.	NON-PREG HEF.	FEMALE CALVES

EID	VID	Breed	Year born	Status	Mated	Est. birth	Days since mated	Diag. due
211503910001	daisy	Friesian X	2014	Pregnant - lactating	1 Feb 17	11 Nov 17	111	2 Apr 17
211503910002	sally	Friesian X	2014	Pregnant - lactating	1 Feb 17	11 Nov 17	111	2 Apr 17
211503910003	bettsy	Jersey X	2014	Pregnant - lactating	1 Feb 17	11 Nov 17	111	2 Apr 17
211503910004	buttercup	Sahiwal	2014	Non-pregant - lactating	1 Feb 17		111	2 Apr 17
211503910007		Friesian X	2016	Pregnant heifer	1 Feb 17	11 Nov 17	111	2 Apr 17
211503910008		Sahiwal	2016	Pregnant heifer	1 Feb 17	11 Nov 17	111	2 Apr 17
211503910009		Sahiwal	2017	Female calf				

4   5   1   4   100%   83%   47.9   12.0

Reporting for Panvila

Start date

24 Feb 2016

End date

23 Feb 2017

🔄 Run report or 🖨 Export report

6	83%	4	75%	2	100%
TOTAL SESSIONS	SUCCESS	TOTAL COWS	SUCCESS COWS	TOTAL HEIFER	SUCCESS HEIFER

Report by technician

Technician	AI Sessions	Success	Attempts - cows	Score - cows	Attempts - heifers	Success - heifers	Score - heifers
Aaron	6	83%	4	75%	2	2	100%

Report by sire

Sire	AI Sessions	Success	Attempts - cows	Score - cows	Attempts - heifers	Success - heifers	Score - heifers
00023	6	83%	4	75%	2	2	100%

Report by farm

Name	AI Sessions	Success	Attempts - cows	Score - cows	Attempts - heifers	Success - heifers	Score - heifers
21150391 - M. Demo	6	83%	4	75%	2	2	100%

REPORTING AT PROVINCIAL OR NATIONAL LEVEL

Reproduction status for Central Province

- Central Province
  - Kandy
  - Matale
  - Nuwara Eliya

Run for Central Province | or | Export report

District	Total milk (L)	Total animals	Preg/lactating	Non-preg/lactating	Preg/non-lactating	Non-preg/non-lactating	Preg heifers	Non-Preg heifers	Female calves	Male calves	Studs	Total lactating cows	Total cows	Total preg	Breedable animals	Avg milk production (L)	Lactating %	Preg %
Kandy	0	11	6	0	3	2	2	0	1	0	1	6	7	9	7	0.0	86%	129%
Matale	0	3	0	2	0	1	0	1	0	0	0	2	2	0	2	0.0	100%	0%
Nuwara Eliya	0	3	0	1	0	2	0	0	0	0	1	1	2	0	2	0.0	50%	0%
Total	0	17	6	3	3	5	2	1	1	0	2	9	11	9	11	0.0	82%	82%

IMPACT ASSESSMENT

OIE

GRA

- FarmIQ's comprehensive farming software is world class

- We can create transformative value for pastoral farms around the world

- Support developing nations to leapfrog others and build national infrastructure

FARMIQ

Thank you

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