

Your Levy at Work



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LATEST NEWS & VIEWS FROM DAIRY SA JULY 2015

**SOUTH
AUSTRALIAN
DAIRY INDUSTRY
Gala dinner
THURSDAY 6TH AUGUST 2015**

The Dairy Industry Association of SA, Royal Agricultural and Horticultural Society of SA Inc. and the South Australian Dairyfarmers' Association invite you to come and celebrate the winners of the 2015 South Australian Dairy Awards.

The SA Dairy Industry Gala Dinner will be held at the Adelaide Showground, Wayville on Thursday 6 August. Come along to mingle with SA industry people, recognise our achievers and celebrate our fabulous industry!

Download your invitation and booking form

www.dairysa.com.au/news-events/sa-dairy-industry-gala-dinner.aspx

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**WARRNAMBOOL
CHEESE & BUTTER
FACTORY, BEGA
CHEESE, MURRAY
GOULBURN CO-OP,
PARMALAT, and B.-D.
FARM PARIS CREEK**
kindly support the
distribution of the
DairySA newsletter.

Disclaimer: Although DairySA has taken all reasonable care in preparing this advice, neither DairySA nor its officers or agents accept any liability resulting from the interpretation or use of the information set out in this document.

Mount Compass landholders tap into new weather network data

Landholders around Mount Compass will be able to access hourly weather and soil data to inform irrigation and pasture management decisions this season through a partnership between landholders and Natural Resources SA Murray-Darling Basin (SAMDB).

Soil moisture monitoring equipment and a weather station established by Natural Resources SAMDB on two dairy farms will provide weather and soil information to help farmers make improvements in water use and nitrogen efficiency, as well as pasture and crop management,

supporting improved productivity, profitability and reduced greenhouse gas emissions.

Natural Resources SAMDB regional land and water management planning coordinator Jeremy Nelson says the stations are part of a state-wide Automatic Weather Station (AWS) monitoring network.

"This network includes 40 weather stations across the SAMDB region and provides irrigators with climatic data including air temperature, humidity, soil temperature, crop evapo-transpiration and wind speed," he said.

What's on?

22–23 July	Grasslands Society of Southern Australia Conference, Naracoorte http://www.grasslands.org.au/
28 July	DairySA Young Dairy Network Dairy Business Bootcamp Workshop 1, Mt Barker. Register now: http://www.dairysa.com.au/news-events/dairy-business-bootcamp.aspx
6 August	SA Dairy Industry Gala Dinner, Adelaide Showground http://www.dairysa.com.au/news-events/sa-dairy-industry-gala-dinner.aspx



Remember to like us on Facebook (Dairy SA and Young Dairy Network SA) and follow us on Twitter to keep in touch and give us your feedback.

How to access soil moisture data

Head to <http://aqualab-data.dyndns.info/secure/common/main.vm> then type in the username 'samdb' and password 'demo'.

As an example of what will be available when the Mount Compass monitoring comes online, scroll down to the Langhorne Creek sites prefixed 'LC' and click on either the 'LC R soil moisture stacked' (a mid-slope rise) or the 'LC S soil moisture stacked' (a heavy flat).

DairySA NRM technical specialist Monique White said the Langhorne Creek dryland sites provide a good representation of what the capacitance probe data will look like for Mount Compass.

"Each colour-coded line represents a different depth of soil and the blue columns along the x axis display rainfall. Rises in soil moisture can be seen in relation to rainfall inputs.

"While the values aren't absolute at this point, we can clearly see the lowest and highest points of soil moisture, which means we can compare the effectiveness of rainfall and irrigation on soil moisture recharge."

Weather monitoring equipment has been installed on Warren Jacobs' Mount Compass property and automatically uploads real-time data to a publicly available website every hour.

"The information can be used to decide when and how much to irrigate and to support other decisions such as the application of foliar sprays and frost risk monitoring," Jeremy said.

"For example, crop evapo-transpiration data gives farmers an idea of how much moisture a crop could lose per day so they can determine when to irrigate and with what amount of water."

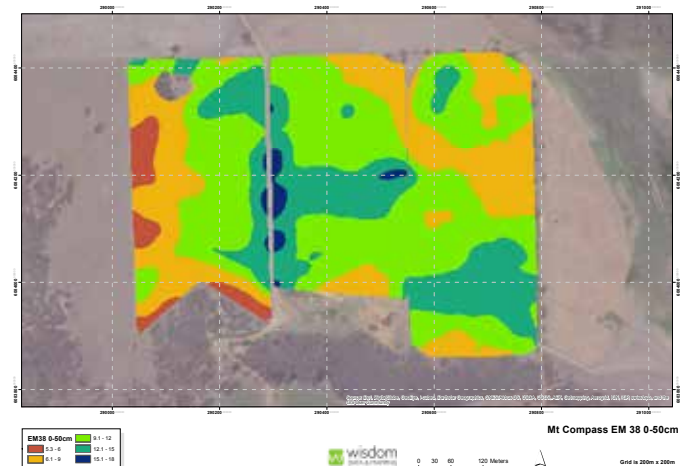
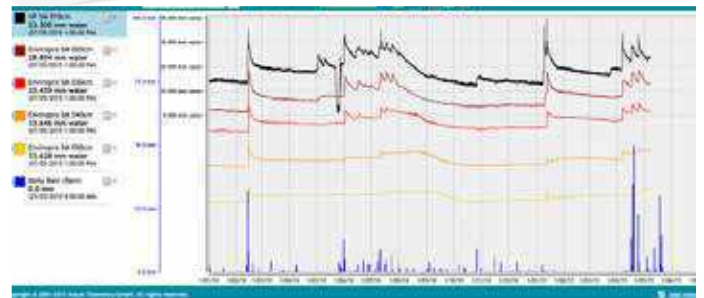
The second stage of the project involves installing soil moisture monitoring at dairy farmer Lee McKenzie's nearby property.

The site has been surveyed using electrical conductivity sensors (known as EM38) to identify soil variation and to plot the best four locations for the soil moisture monitoring equipment across the paddock's different soil types. This monitoring will enable farmers to compare graphical soil moisture data and soil tension data.

The soil moisture sensors, comprising capacitance probes and gypsum blocks, will allow farmers to gauge the effectiveness of rainfall and irrigation on the differing soil types.

"This is achieved as farmers develop an understanding of how much moisture each profile can hold from season to season based on the soil monitoring sensor information," Jeremy said.

How to access Automatic Weather Station data
Visit <http://www.aws-samdbnrm.sa.gov.au/> and click on any of the monitoring sites to see the information for that location.



EM38 map showing the range of soil types across the soil moisture monitoring site

"Subsequent comparisons of this information to plant vigour then provide a solid basis for interpreting the effectiveness of differing rates of irrigation on the varying soil types and whether changes to irrigation could be beneficial."

Through this project, farmers, agronomists and local contractors will have the opportunity to review the effects of climate, rainfall and irrigation on the region's common soil types.

Information from the Mount Compass site will be available with monitoring data from similar equipment installed at Langhorne Creek and in the Mallee.

Soil moisture monitoring will be operational at the Mount Compass site in the next few weeks.

For more information contact Jeremy Nelson at Natural Resources SAMDB on 0429 845 216 or jeremy.nelson@sa.gov.au or DairySA NRM Technical Specialist Monique White on 0400 972 206 or monique@dairysa.com.au

Movie star dairy farmers!

Dairy farmers are featuring in a national YouTube educational campaign to demonstrate how good business management reduces greenhouse gas emissions.

Dairy Australia's Land, Water and Carbon Team are involved in producing a series of national YouTube clips and fact sheets showing how farmers can profitably reduce emissions intensity (emissions per litre of milk).

The key messages are:

- Identify and cull less productive animals. Your most productive cows make the most money and produce the least GHG emissions.
- High quality feed is always best. Feed a high quality diet to increase milk production and reduce GHG emissions.
- Get your nitrogen fertiliser strategy right. Apply nitrogen at the right time, in the right place, with the right product and at the right rate to improve on farm nitrogen use efficiency and reduce GHG emissions.
- In calf, on time, every time. This makes your herd more profitable and reduces GHG emissions intensity.
- Keep cows comfortable. During extreme weather events this will reduce stress and associated losses in milk production.
- Smarter energy use. Monitor electricity consumption and equipment performance.

The Land, Water and Carbon team have learned some film production skills along the way. Here is our own Monique White ably assisting Matt Woods (film maker) to interview Jake Connor at Mount Compass last month.



The Profitable Dairying: Farm-Link project will also be holding workshops and field days to demonstrate the key messages, as well as publishing case studies of SA farmers who are profitably reducing greenhouse gas emissions.

The first of these events will be held in Mount Gambier on 21 July focusing on nitrogen use and in the Barossa Mid North on 22 July looking at cow comfort and feed conversion. Head to <http://www.dairysa.com.au/news-events.aspx> for more details.

The YouTube clips and fact sheets are still in production with more filming to be done nationally. They are due for completion by October 2015.

For more information about the Profitable Dairying: Farm-Link project and events, contact Louise Stock on 0407 711 576 or louise@dairysa.com.au or Monique White on 0400 972 206 or monique@dairysa.com.au.

Dairy hygiene – recipe to quality milk

At the DairySA Conference earlier this year, Gabriel Hakim from AgVet Projects was a popular afternoon session presenter, with his 'principles' approach to effective cleaning in the dairy.

"Regardless of the techniques used or the layout of the milking equipment, there are six key elements that are fundamental to success in cleaning a milk machine," he said.

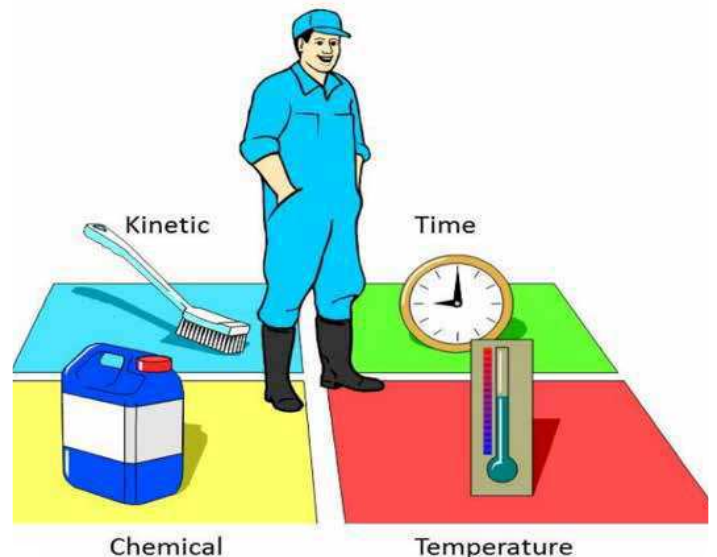
The principles cover: soiling; water; energy; time; drainage; and machine maintenance.

Soil

These are milk-based residues that deposit onto the surface of milking machine equipment, and contain organic (milk, fat, protein, lactose) and inorganic (minerals) compounds. Microbial and water-borne contaminants can contribute to the deposit.

Water

Water acts as the carrier of the cleaning chemical and the soil being removed. Sufficient quantity and quality are crucial for effective cleaning.



Wash programs must be adjusted to compensate for the effect of hard water: more alkaline detergent must be used, as well as sequestering or chelating agents to prevent scum formation.

Energy

Thermal energy relates to the heating of water and wash solutions. It increases the rates of chemical reactions in the cleaning solution to break down the soil and temperature is also used as a sanitising agent. However, Gabriel warned against using water that is too hot as it can lead to higher energy bills and damage equipment.

Kinetic energy is turbulence, which provides the scrubbing action in the cleaning process. The turbulent action lifts deposits from surfaces and also plays a dispersive role.

Chemical energy drives the reactions between the detergents and the deposit. Reactions will occur if the chemicals are matched to the deposits. Universally, three types of detergents are used to clean milking equipment: alkaline detergents to remove organics, acid detergents to remove the inorganics and acid-based sanitisers.

Time

Relates to the contact time between the cleaning solution and the surface to be cleaned—it must be sufficient.

Drainage

The ability of solutions and residues to be drained from the equipment, reducing contamination.

Machine maintenance

The routine maintenance of milking machine components is important, as well as monitoring of system performance (especially water quality and temperature) to ensure effective cleaning for optimum milk hygiene.

If you would like help, support and resources to improve milk quality on-farm, please contact your field officer, the Dairy Authority of SA or DairySA.

Have you herd...?

The Australian Dairy Herd Improvement Scheme (ADHIS) recently introduced three new breeding indices:

- **Balanced Performance Index (BPI)**: focuses on maximising net profit through production, fertility and type; replaces the current Australian Profit Ranking (APR).
- **Type Weighted Index (TWI)**: focuses on improving overall type, mammary system, udder depth and fore udder attachment.
- **Health Weighted Index (HWI)**: strongest focus on fertility, cell count, feed saved and survival.

Head to <http://www.adhis.com.au/> for more information and look under the NoticeBoard tab for 'Australia's New Indices'.



Balanced Performance Index (BPI)

- Economic Index
- Blends production, type and health traits for maximum profit
- In line with farmer preferences

Health Weighted Index (HWI)

- Fast track fertility and mastitis resistance

Type Weighted Index (TWI)

- Fast track type