

# Allflex Livestock Intelligence and Monitoring



Photo courtesy of Terry Swney

Allflex Monitoring solutions provide you with peace of mind and unsurpassed support. There are three main reasons clients look to go down the path of monitoring.



## Heat detection

Allflex monitoring utilises information about specific cows' activity and rumination for unmatched heat detection. With drafting integration, this means that the animals who are ready to be AI'd are in the pen at the end of milking.

There are several components that make our Cows Ready for AI report an excellent tool:

1. Breeding window to give accurate timing for insemination based on that specific cows' behaviour
2. All the relevant information about that animal is in one place, alerting you to possible conception issues in real time
3. System uses +25 years of research and development to give a confidence level that each animal is genuinely on heat, and which gives the best indication of opportunity to conceive.
  - a. Rumination drop is an important indicator of heat behaviour, and allows for accurate detection of silent heats which can be missed without it
  - b. Heat-specific behaviours are individually monitored and allow animals to be ranked, in conjunction with breeding window for opportunity to conceive

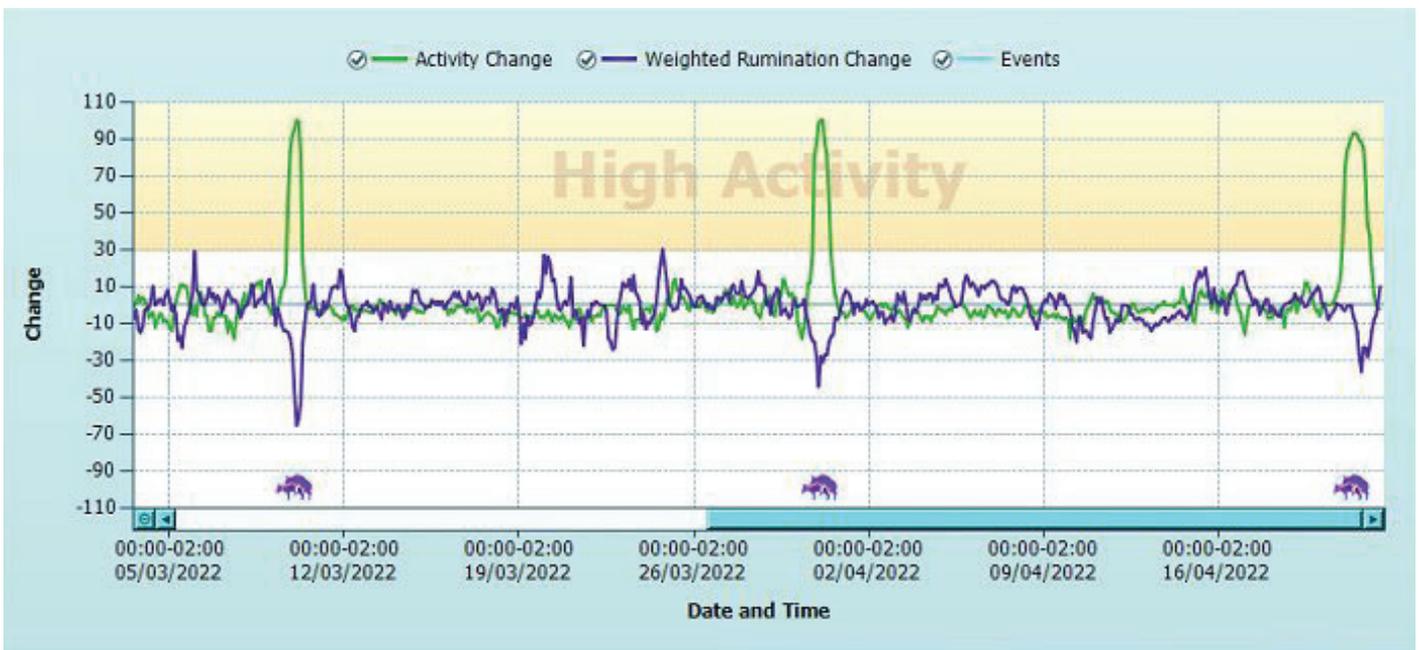
Cow Number	Lactation Number	Lactation Status	Days in Lactation	Number of Breedings	Days From Last Cycle	Days from Last Breeding	Breeding Window	Rumination Peak	Heat Index
1 138	1	Open	216	4	24	111	15	-26	84
2 376	5	Open	246	3	1	131	1	-36	84
3 388	1	Open	211	2	31	126	31	-29	84
4 501	8	Open	194	3	22	115	17	-88	84

Utilising the reproduction information means there is no requirement for visual aids or a staff member to spend weeks on end selecting cows; high value semen can be targeted to animals who have the strongest cycles and are in the optimum breeding window; and pre-mating heat detection is accurate, automatically recorded, up-to-date, and ready to use for synchrony or non-cycler programs.

The system also helps you get a head start on your scanning by giving an indication of the cows "Pregnancy Probability", and also providing you with a list of animals who have been confirmed as pregnant but are displaying heat behaviour. This increases your efficiency by allowing you to re-check these girls before pumping long WHP dry-off products into them and feeding them expensive winter feeds. Furthermore, it will give you a list of animals who are confirmed as empty, but who are still anoestrous, allowing selection of Carry Over animals to be more effective.

### Things to keep in mind:

The Heat Detection is excellent but does not guarantee 100% of your animals will get in calf. It is important to remember that with any technology, the best it can do on a heat detection front, is tell you who is on heat and when to inseminate them. If the semen is no good or in the wrong place; if you have issues with non-cycling animals which you do not rectify; if there are underlying conception issues such as BVD or mineral issues, technology will not correct these issues for you. It will simply remove heat detection as a mitigating factor for not reaching your Repro KPIs. The best way you can impact on your Repro results, is to use rumination information to detect health issues and improve post-calving transition, to ensure your animal has the best chance of cycling quickly post calving, and conceiving to the first service.



## Results

Most significant impacts tend to be on submission rates, 3-week in calf rates, and conception rates. For example, last year in South Canterbury and North Otago, for first time users (with some caveats), here is an example from last year of average results:

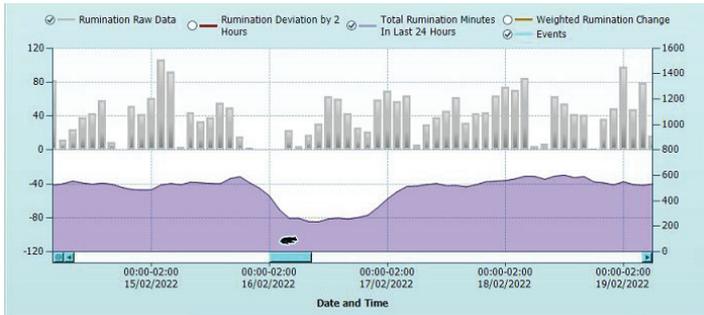
- +4.1% in CR (9/2)
- +5.42 3-week ICR (13/-2)
- +5% 6-week ICR (10/2)
- -1.2% MT
- -15.5 short returns

## Health

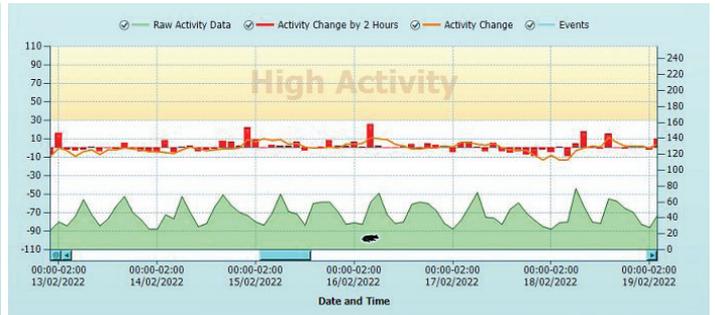
Allflex monitoring again utilises information about specific cows' activity, eating and rumination to determine animals who are critically unwell, or who are declining in health with sub-clinical issues. Traditionally clients have chosen to go down the path of monitoring for heat detection, and by the second season the realise that Health is the real winner.

### Distress notifications

These are notifications sent through to your phone to alert you to animals who have stopped ruminating and eating for an abnormal period of time. These can indicate serious time sensitive issues including prolonged calvings or dystocia, metabolic issues, a nasty mastitis that has caused systemic unwellness (i.e., E.coli or pastuerella), or other conditions that cause an animal to decline in health rapidly. These issues often are detected with rumination and corrected prior to deviation in activity (depending on the issue).



Rumination



Activity

### The Health Report

Easily the coolest report of the whole system. This system utilises each individual cows "normal", along with what the system expects from her based on where she is in her lactation cycle, to present you with a list of animals who should be checked and/or monitored.

This report has been externally verified by Cornell university in terms of how sensitive and specific it is at detecting certain health issues including **displaced abomasums, ketosis, metritis, gastrointestinal issues, and mastitis**. It also looked at how much earlier these animals were flagged, and we will discuss this report today.

Disorder	Cows detected Se, % (95% CI)	HI <86 to CD (d)
DA (n = 41)	98 (93-100)	-3 (-3.7 to -2.3; P<0.01)
Ketosis (n = 54)	91 (83-99)	-1.5 (-2.3 to -1.0; P<0.01)
Indig. (n = 9)	89 (68-100)	-0.5 (-1.5 to 0.5; P=0.28)
<b>All metabolic &amp; dig. (n = 104)</b>	<b>93 (89-98)</b>	<b>-2.1 (-2.5 to -1.6; P&lt;0.01)</b>

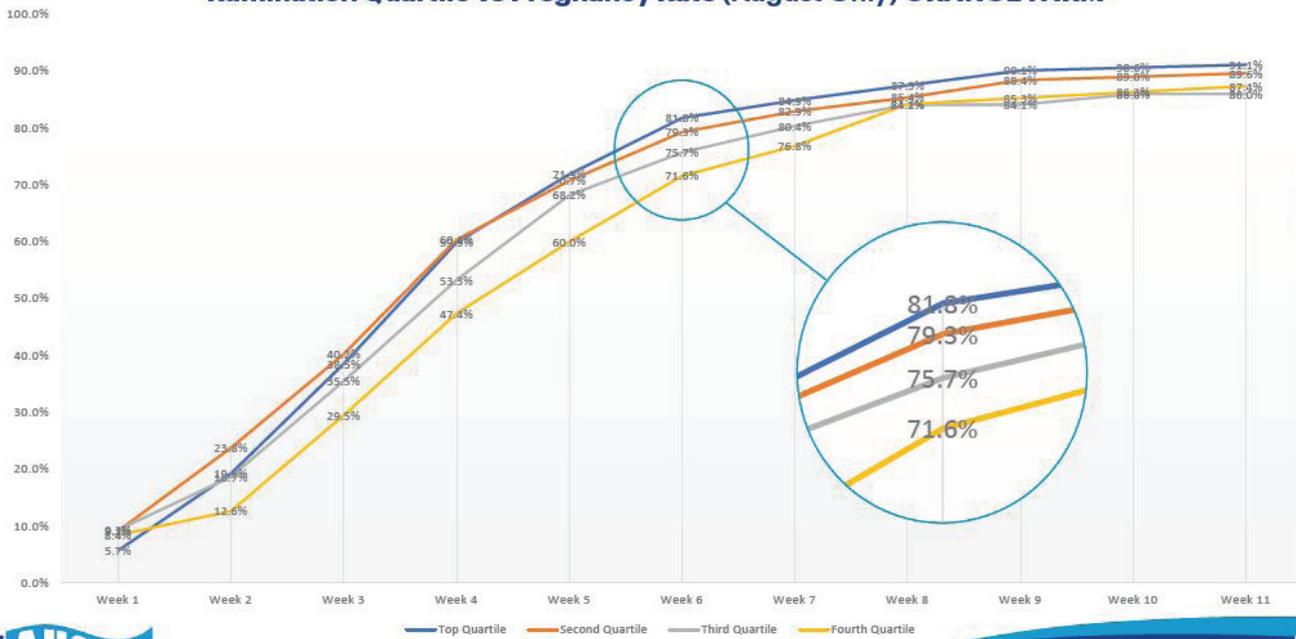


### Calving transition

This is where the main focus has been over the last 18 months. NZ research shows a significant impact on rumination recovery in fresh cows and the use of our custom-built portals, or by the ease of creating a custom report for an individual farm, this makes it easy to track in real time when management practices need tweaked or to monitor who is ready to be transitioned into the main milking herd.

We also have plenty of NZ data around response of rumination to metricuring, splitting herds by age, and response of rumination to OAD vs. TAD milking as fresh cows, along with rumination over the colostrum period compared to production.

## Rumination Quartile vs Pregnancy Rate (August Only) ORANGE FARM



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## Nutrition and Group Monitoring

A third significant opportunity monitoring presents is the ability to help manage nutrition and operational efficiency at a group (and individual). This helps us understand that what and how we feed our animals can have a significant impact on them and can help justify or improve operational changes and increase feed efficiency. The very easy to follow graphs tell you if someone has had a wee sleep in while you were away, or if there is an issue in real time with increased activity at the herd level, or even a drop in rumination at a herd level you can receive an alert to your phone.

We can also monitor heat stress, which as we all know results in production loss, reproduction issues and welfare concerns.



## Our support model

We invest back into our clients by providing aftersales support to both the farmers, and rural professionals who would like to learn about the system. We do this in several ways:

**Aftersales support:** Full personalised training by dedicated and skilled training team involving on farm one on one sessions, custom built NZ user manuals and online training options. We also have an NZ based technical support team available from 4am every day of the year, to help with any technical issue or urgent questions regarding the information coming out of the system. We also have a dedicated technical vet for monitoring to provide support to your vet where required. Furthermore, we hold regular user only sessions where we provide you with updates, improvements, and further training by presenting you with any new research or information which has been collected.

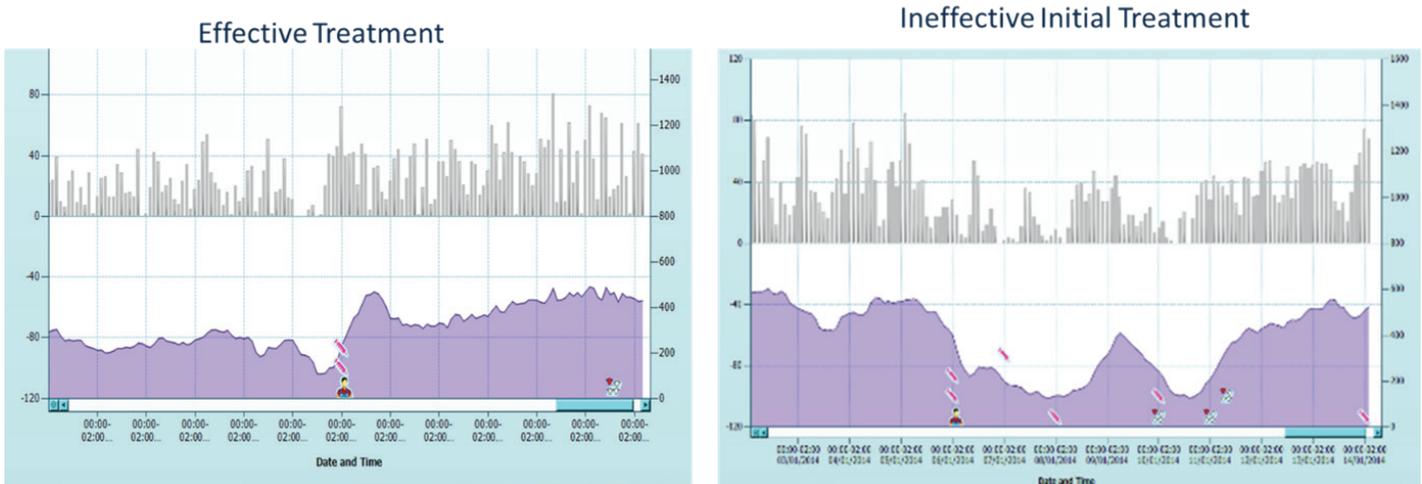
**The Elite Package:** Custom built for NZ farmers, there is a package which has been built for clients who have solid relationships with their vet and want to push the envelope to make the most of the information around critical points of the year.

**LearnAllflex:** Custom built NZ training and certification program for vets, nutritionists and farm consultants to maximise the outcome for our clients, by us supporting their trusted rural professionals. Created with the input of our training team and supported by our Technical Vet.

**Multi-farm dashboard:** Coming new this season is the ability to monitor key KPIs across multiple sheds. Helpful for vets, farm consultants or owners of more than one property who want to track progress across multiple sheds in one go.

## Costs and ROI

Dependant on herd size, coverage and level of information. Trevor Green, sales specialist to discuss.



## Reading if you're into it:

[www.vet111.co.nz/mooznews](http://www.vet111.co.nz/mooznews) March 2022

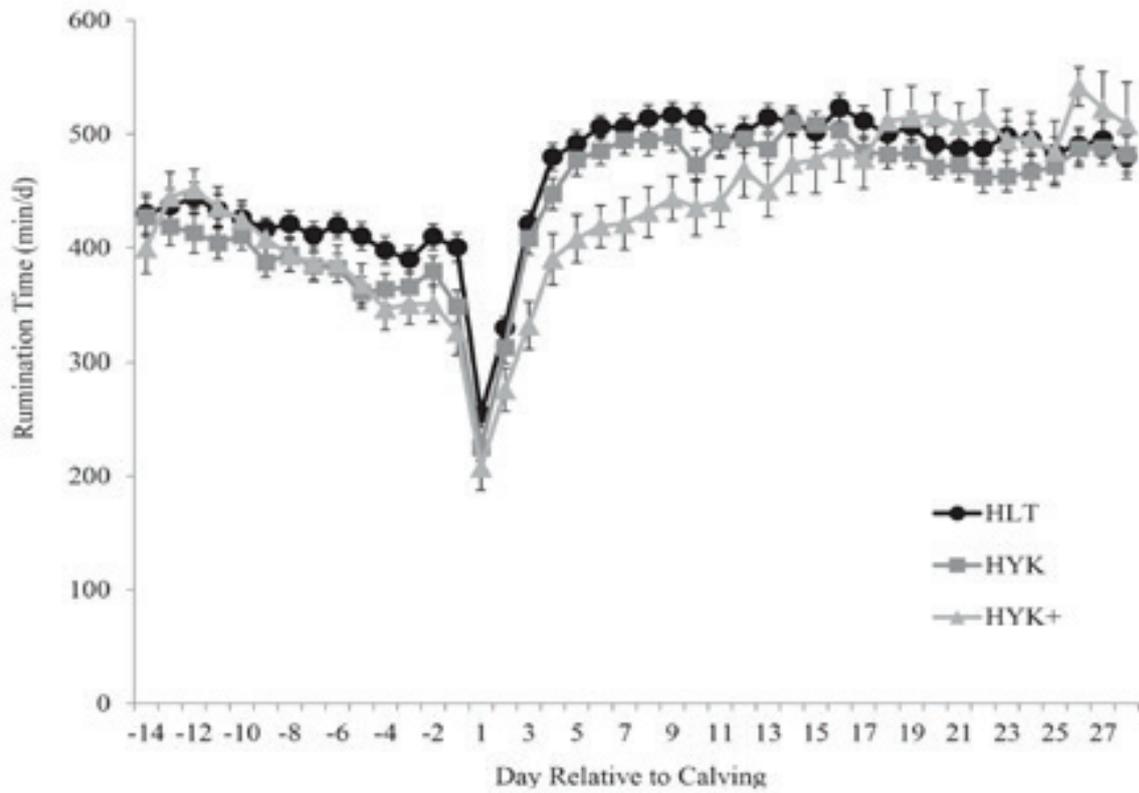
Stangaferro ML, Wijma R, Caixeta LS, Al-Abri MA, Giordano JO. Use of rumination and activity monitoring for the identification of dairy cows with health disorders: Part I. Metabolic and digestive disorders. *J Dairy Sci.* 2016 Sep;99(9):7411-742

Stangaferro ML, Wijma R, Caixeta LS, Al-Abri MA, Giordano JO. Use of rumination and activity monitoring for the identification of dairy cows with health disorders: Part II. Mastitis. *J Dairy Sci.* 2016 Sep;99(9):7411-742

Stangaferro ML, Wijma R, Caixeta LS, Al-Abri MA, Giordano JO. Use of rumination and activity monitoring for the identification of dairy cows with health disorders: Part III. Metritis. *J Dairy Sci.* 2016 Sep;99(9):7422-7433

Kaufman EI, LeBlanc SJ, McBride BW, Duffield TF, DeVries TJ. Association of rumination time with subclinical ketosis in transition dairy cows. *J Dairy Sci.* 2016 Jul;99(7):5604-5618

Soriani N, Trevisi E, Calamari L. Relationships between rumination time, metabolic conditions, and health status in dairy cows during the transition period. *J Anim Sci.* 2012 Dec;90(12):4544-54. doi: 10.2527/jas.2012-5064. Erratum in: *J Anim Sci.* 2013 Mar;91(3):1522



**Figure 2** Daily rumination time (mean  $\pm$  SE; min/d) over the transition period (-14 to 28 d) for healthy multiparous cows with no other recorded illnesses (HLT;  $n = 87$ ), subclinically ketotic multiparous cows with no other health problems (HYK;  $n = 76$ ) and subclinically ketotic multiparous cows with other health problems (HYK+;  $n = 39$ ).