WHAT'S NEW @ NOVEL WAYS?

Electronic manufacturing and development news

www.novel.co.nz *June 2008*

Batt-Latch update

- Batt-Latch a proven time-saver
- Batt-Latch developments
- Pay-back times for products outlined

Other features

- Introducing the GrassMaster II and friends
- What do you know about Brix meters?
- Possum update

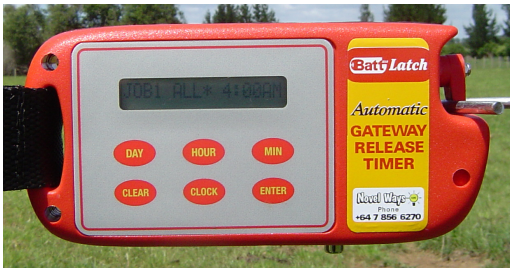
Solar-Powered Profit Generator

It's not the best job on the farm - bringing the herd up for milking on a dusty hot day, or in the early hours of the morning. Thanks to the Batt-Latch, a solar powered portable gate release timer, you really don't have to do it anymore.

Over the last few years, the Batt-Latch (designed and manufactured by Novel Ways in Hamilton), has been making life a lot more pleasant for many dairy and drystock farmers all through New Zealand, while exports to Australia, USA, Ireland and Sweden are under way.

The Batt-Latch gate timer is usually used with the supplied portable spring gate kit to hold the herd back in a paddock, raceway or feedpad. At your preset time the temporary gate's handle is released by the timer's gearbox, and the spring contracts onto the opposite post, alerting the stock that it's time to go.

Making the first timers and showing them at National Fieldays was the start of a huge learning curve for the business. Farmers were moderately interested in using the Batt-Latch for break-feeding over winter, which was the main job it was designed for. Soon dairy farmers tried the timers with their milking herd, and in most cases the cows walked happily to the dairy. More recently, all-grass dairy farming is morphing into larger grass-based systems with supplements, usually placed near the dairy on feedpads.



Many pioneering farmers changed their farm practices to use their Batt-Latch timers more effectively.

Cows can be released from the paddock at 2am or earlier, to a feedpad preloaded the night before. They may pass under a shock cord gate at the feedpad entrance, which is held up in the middle by another timer. At a time when all of the cows have normally passed through, that gate is released back to the normal horizontal position, holding the cows on the feedpad until milking time if required. The herd can be held up in the race after milking by another timer, so they all get to the next paddock or a crop allocation at the same time. All of these clever adaptations, and many more, were thought up by farmers, not the product designers.

When Novel Ways started asking farmers about the benefits of using the timers, some startling answers were given. Several farmers reported up to 60% lameness reductions in their herds, and time-savings of hundreds of hours per year. While little documented research has been done on the Batt-Latch, cows being allowed to walk at their own pace down races that may be long (and perhaps in less than perfect condition) , saves worker time and wear on hooves.

Drystock and runoff farms also suit the Batt-Latch timers. The timer can wait for up to two weeks before releasing, so a small set of timers can be used to move drystock every few days, saving big travelling distances to remote runoffs. Remarkably, at least one drystock farmer reported to Novel Ways that if bulls and steers are given more frequent unattended pasture breaks by their timers, they put on weight faster and don't damage fences and paddocks as much.

So there you have it – a hard-working solar powered tool that can save a great deal of time and lameness costs, increase productivity and pay for itself very quickly, according to the proud staff at Novel Ways.

Recommended Retail Price $395 + GST

Payback period for one Batt-Latch timer is estimated to be as quick as just 15 -16 days.

Batt-Latch news from users and field trials

Batt-Latch Product Update

Many think running a horn or loud buzzer when the Batt-Latch releases would be needed to get the herd on the move. In fact cows will very quickly train to the noise of the released spring gate hitting the opposite post, which makes a fairly good racket. For quicker herd training, you can add metal discs or bells to the spring gateways.

On request, and for an extra cost, we can fit a 6volt horn and adaptor to your new Batt-Latch.

Cows that are moving to supplementary feeding (feedpad, in-shed feeders, maize, turnips etc) will generally be more motivated than those moving through the dairy shed to grass.

We now supply an extended spring gate (export length, not in NZ stores) with adapted hook fittings either end. We also have available, a custom shock cord gateway. The shock cord gates make less noise, but are easier to carry. You need to make sure they flick right across the gateway and stay out of the path of stock.

Remote Control Gate Release

An option for the Batt-Latch that may appeal to some farmers, is a long or short-range remote trigger for gate release. We have a prototype Batt-Latch that can be triggered on demand from a distance of three kilometres. This option could be used to let a second herd go at an adjustable time for milking, or stop pugging in sudden wet weather.

Part of the design includes the idea of having one of several gateways triggered from a transmitter switch panel in a control area like the dairy shed. The radio frequency remote requires no licence and each use is free.

We have also found a tidy way to swing open standard pipe and wooden gates to allow stock and vehicles through. We are using commercial gas struts with special brackets. By mounting the Batt-Latch in a sturdy frame, the new prototype can open raceway and farm gates in front of vehicles, saving half of the normal work. Of course the remote unit can also allow stock movements on demand, at a range of up to 3 km.

Your enquiries are welcome.

If Your Batt-Latch Fails…

If the outer case is damaged in some way and moisture appears on the inside of your Batt-Latch (above the display panel), you should be preparing to send it back to us before corrosion sets in. This will lower any repair cost outside warranty.

We always try to repair any Batt-Latches the same day we receive them, because we know how important they may be to your farming routine. We have parts available at all times, and also have a few refurbished Batt-Latches that can be loaned out if you want to reduce the inconvenience. Some of our customers who live close to Hamilton or are visiting the shops, Ruakura or Fieldays, have used the same-day repair service which we are happy to provide. It is not rapid exchange, as we like to keep a good trace on every unit manufactured. The same prompt service is available through any retailer that you may have purchased the unit from.

Almost all older Batt-Latches are repairable (unless your tractor has run over them). We often recommend replacing the outer case, keypad and motor on units that are three years older and over, to give them a new lease on life. These refurbished units then get a new 6 month warranty from us. The cost for refurbishing doesn't exceed $180 + GST, well under half the cost of a new Batt-Latch ($395 + GST retail). Smaller repairs range from about $40-$120 + GST.

New Batt-Latch units have a warranty of 12 months from the date of purchase

Each unit is sold with a manual and a registration form to fill out, to establish that warranty.

Severe handling of the units, damage by external forces, or plain bad luck, may see them back for repair before 12 months use has been had by you, the owner. Generally we don't charge the repair labour in these cases, but will often charge for parts needed. Of course, any other problems caused by manufacturing defect, or seen under normal use, are fully covered during the warranty period.

Visit us at the
National Fieldays
11-14 June 2008
at Site M32

Product developments and key projects

When your eye-o-meter is just not good enough…

The GrassMaster II uses the well-established capacitance method to estimate drymatter. It is highly portable and easy to use, is not affected by pugged pasture or hills, and can be used in wet conditions.

Grass is the major crop in New Zealand. It underpins our agricultural economy and blankets a large proportion of the landscape. Despite this, there are widely held concerns that the rate of pasture renovation on many farms is too low, and that the management of pasture, drymatter quality and production could be improved quite easily using new tools.

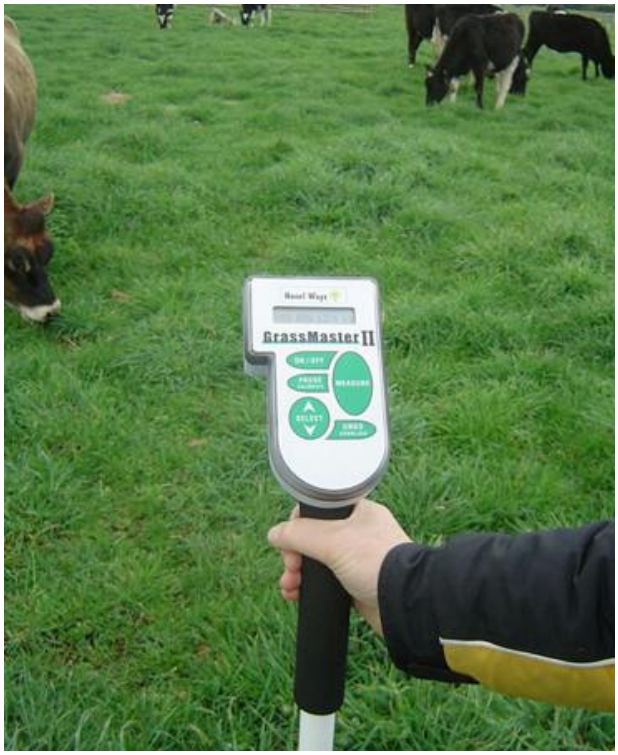
Since 1996, Novel Ways engineers have been involved in the development of an instrument (the GrassMaster II) to estimate the drymatter content of pasture. Using electronic signals, the hand-held GrassMaster probe senses the water trapped inside the nearby grass blades, and uses a software adjustable equation to give a repeatable average of the measurements, quickly taken across the paddock on a walk. The resulting figure is usually given in kilograms of drymatter per hectare (kgDM/Ha).

The rugged and dependable GrassMaster II holds the average drymatter figure for up to 200 paddocks, and this very useful information can be read off the screen or downloaded to a computer. Novel Ways have linked up with Livestock Targets to utilise their Feedpad QA software, which is a very flexible and powerful feedbudget and farm mapping package.

Once the farm walk is completed by any staff member, the GrassMaster information can be used to quickly create a feed wedge graph, total feed available, and a host of other trending data. The drymatter information is fixed by the instrument, so it can be relied on year after year. Over a period of time, the impact of fertiliser regimes, new grass types, seasonal changes, stocking rates and so on can be seen in the figures, and related directly to farm outputs like meat and milk production.

The GrassMaster II uses the well-established capacitance method to estimate drymatter. It is highly portable and easy to use, is not affected by pugged pasture or hills, and can be used in wet conditions. It is quite simply the best instrument of its type in the world.

Having a regular close look at your paddocks is very important. Of all the free energy from the sun warming a paddock during the year, an average pasture converts just two percent of it (one fiftieth) into grass sugars and fibre that ruminant stock can digest. That's not a great conversion rate. While farmers cannot easily change the conversion efficiency of their stock feeding on that grass, they can usually help their paddocks perform well above average.



Extra profitability on farms can result from using better grass cultivars, having less pugging and damage from improved stock and pasture management, reducing reliance on supplements, using fertilizers carefully, improving ME of the grass grown, and increasing top-soil depth and quality. Many of these outcomes rely on initial monitoring of the current situation, and accurately measuring changes and improvements. At RRP $1,500 + GST, the GrassMaster II drymatter instrument might be a highly cost-effective starting point.

Feedpad QA Farm Management Software

Novel Ways is pleased to be associated with Livestock Targets' Feedpad QA software – it's a natural partner for our GrassMaster II if you are serious about getting the best out of your dairy, sheep, beef, deer or goat farm!

Talk to staff at the Novel Ways Fieldays site, or visit www.livestocktargets.co.nz

Fieldays Special

At Fieldays – and until the end of June 2008 – we're offering a great special on these featured products; order the TechPack now and save over $400.00!

The TechPack purchase bundles together a GrassMaster II (valued at $1,500 + GST), the feedpad QA software (RRP $395 + GST) and a Batt-Latch (retailing for $395 + GST) for just **$1,890 + GST**. *Call Novel Ways today!*

Brix Meter

How would you like to have an almost instant measurement of your grass quality using a handheld instrument? Low cost equipment used by the horticultural industry to measure the status of fruit and vegetables before and after harvesting may provide the solution.

The Brix scale is primarily set up to estimate the percentage of dissolved sugars in water, using refraction. Other dissolved materials like enzymes and vitamins also have an effect on the Brix reading - used as an indication of the **quality** of the material, compared to other samples which have a lower percentage reading.

It's possible that pasture grasses with higher than normal Brix readings will result from better than average soils, and that this extra sugar and vitality in the grass will be sought after by ruminants.

We have purchased our first stock of these Brix meters, and we chose the Atago PAL-1 unit pictured. It is fully electronic, compensates for different temperatures and is easy to use. The RRP is $495 + GST.

We're very excited by the positive aspects of measuring Brix: the Atago meter partners very well with our GrassMaster II and the Feedpad QA software. High-Brix grass may result in better meat and milk-solid returns for farmers, and soils that produce high-Brix grasses will probably hold more carbon in the topsoil layer. As chemical fertilizers like urea will only increase in price as gas reserves become limited, the idea of naturally available fertilizers and minerals appeals.

Still Seeking Out Possums…

Many of you will know that Novel Ways received some part-funding from Technology NZ (FoRST), while developing a series of prototype electronic resetting possum traps and field-testing them.

Following on from this research, Novel Ways have continued to look for a weak spot in the armour of the average possum. We remain hopeful that audible and visible attractants can be used to increase the efficiency of poison bait-stations. A bait-station is like a low cost resettable trap, and if less of these are required over a given area, each station can be a bit more elaborate. New bait-station features could include being closed during the daytime, requiring force to open the feed flap, and other changes designed to reduce labour and by-kill to a minimum.

The research at Novel Ways is now concentrated on recording wild possum vocalisations and behaviour, and we have assembled a solar-powered pan/tilt/zoom camera that can be controlled over the internet (the camera also has applications in monitoring livestock and farm operations). The video feed is saved to a computer, and possum sounds can be downloaded into small noisemakers similar to those used in musical greeting cards, to be attached to bait-stations for trialling.

Some promising sounds have been digitally recorded and the best of these will cause some possums to immediately move at least several metres to investigate the source. We have also discovered that low frequency tones tried briefly by other researchers will more likely scare them away. Interestingly, there is a lack of detailed research into the range and ability of the possums' hearing and night vision in the wild, although in many other aspects they are one of the most studied animals on the planet.

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