

WHAT'S NEW @ NOVEL WAYS?

Electronic manufacturing and development news
Fieldays, June 2010

www.novel.co.nz



Batt-Latch update

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

Other features

- The GrassMaster II
- Introducing the Brix meter
- The TempPro Vat Monitor

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 export sales are increasing.



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. Grass is still the main feed.

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.

Call Novel Ways today!

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 the design team

Batt-Latch Product Updates

We have made some small changes to the Batt-Latch case tooling. The solar panel is protected with a border strip, internal space is provided for a remote control link, and we are using a new engineering plastic for the case, which is now a deep blue, is tougher and longer lasting. Inside, the battery pack is now a Nickel Metal Hydride type, easier on the environment and more durable - you should get years of use.

We usually supply an extended spring gate (export length, not usually in NZ stores) with adapted hook fittings either end with each sale. We also have available, a custom shock cord gateway. The shock cord gates make less noise, but are easier to carry.

Batt-Latch BOSS Remote

An option for the Batt-Latch that will appeal to some farmers, is a long or short-range remote trigger for gate release. We can modify your Batt-Latch so that it can be triggered on demand from a distance of up to five 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.

One Batt-Latch modified with receiver and aerial plus one four-channel 5km Boss Transmitter system ready for expansion: \$725 + GST

Visit us at the
National Fieldays
16-19 June 2010
**@Site PF6 in the
Pavilion Premier Theme Area**

Who Let the Dogs Out?

*Five Star Products (Wanganui Enterprises)
are an engineering firm building dog kennels,
amongst other things.*

They have built an adapter to allow our standard Batt Latch timer to release their kennel gates. Great for letting a trained dog out to fetch in the cows, especially suited to larger farms.



See them at Fieldays:

Site G62

Phone 06 343 7053

www.fivestar.org.nz

Sustainability Issues

All latest model Batt-Latches run entirely from the sun, so they never need to be taken out of service for recharging. These units are hand-assembled in our ex-dairy factory, once the town milk supply for Hamilton.

We want you to get several years of use out of each timer, and are very proud of the reduced overheads you should achieve on the farm, while using them. If you have any trouble with the timers, we will fix them promptly, usually same-day.

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 old 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 confirm 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.

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 damp 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 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 ASL to utilise their FeedFlo software, which is a flexible and powerful feedbudget 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.

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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 \$1,495 + GST, the GrassMaster II drymatter instrument should be a highly cost-effective starting point.

Feedbudget Software

Novel Ways is pleased to be associated with Agricultural Softwares' FeedFlo - it's a natural partner for our GrassMaster II if you are serious about getting the best out of your dairy farm!

Talk to Chris at Site EX4
or visit www.feedflo.co.nz



Fieldays Special

At Fieldays - and until the end of June 2010 - we're offering a great special on these featured products; order the GrassPack now and save \$375.00!

The GrassPack purchase bundles together a GrassMaster II (valued at \$1,495 + GST), the FeedFlo software (RRP \$350 + GST) and an NWL-32 Brix Meter (retailing for \$195 + GST) for just \$1,645 + GST. *Call us today!*

NWL-32 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. The Brix reading is used as an indication of the **quality** of the material, compared to other samples which have a lower percentage reading.

It's noted that pasture grasses with higher than normal Brix readings will result from improved soil biology, and that this extra sugar and vitality in the grass will be sought after by ruminants.

We have researched this issue and now stock the top quality NWL-32 unit pictured. It is an optical refractometer, automatically compensates for different temperatures, and is easy to use. The RRP of a forage measuring kit is just \$195 + GST, including a rugged grass press and operation manual, and a bonus soil temperature probe.

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 their increasing topsoil layer.

The TempPro Vat Monitor

For the last few months, we have been working with Jaymor Industries and DTS on an affordable vat milk temperature monitor for dairy farmers.

This system is standalone, and uses a wireless remote link, so that it is very easily installed. The unit in the milking platform has a highly visible display showing the vat temperature, and will visually warn you if the temperature is not in the correct range for storing milk. It will also advise if the agitator is not powered up (normally a sign that refrigeration is not turned on). If required, the same information can be transmitted 2-3km to another site, like the farm owner's home. This new equipment should save many farmers from occasional (but expensive) milk temperature grades. The first production units are ready, and will be showcased on our site at National Fieldays by DTS staff.

Maungatautari Reserve

We have assembled a \$10,000 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, or can be viewed haltingly in real time. If fast broadband is available, the audio and video is even better.

We intend to donate this camera system to the Maungatautari Ecological Island Trust, to be used in monitoring the Southern Enclosure gates, and perhaps also for general advertising/viewing of the native animal life, as it rapidly increases in a pest-free environment. The mountain will be a must-see tourist attraction in the years to come.

Already, the flora and fauna on the mountain is rocketing away, thanks to the work of many volunteers, and fundraising. This is a great project to be involved with. Visit: www.maungatrust.org/



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