



MASSEY UNIVERSITY
COMMERCIALISATION

C-DAX PASTURE METER



Dr Rob Murray & Prof Ian Yule

Developed at Massey University's New Zealand Centre for Precision Agriculture, the C-Dax Pasture Meter is fast becoming the new measure of farming success.

The Pasture Meter concept arose from the need for a more accurate and consistent pasture measurement system to assist farmers in making informed decisions about pasture utilisation.

Traditional plate meters require farmers to walk long distances, manually measuring paddocks from corner to corner. In partnership with postgraduate students Rob Murray and Hayden Lawrence, Prof Ian Yule sought to develop a system that would save time and increase efficiency by providing consistently fast and accurate measurements, independent of the user's ability.

The resulting Pasture Meter combines advanced sensor technology with robust design. Measurement sensors slot into sledges developed by commercial partner C-Dax, which

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allow the system to be towed behind an ATV or quad bike. Pasture Meter can be towed at speeds of up to 20kph and relied upon to produce fast, accurate measurements.

Since its inception, the Pasture Meter has been developed to incorporate GPS and information technology. It enables farmers to transfer data directly to a computer for ease of record keeping and comparison. It assists farmers in making informed decisions about feed budgets, fertiliser application and pasture utilisation. It's now being sold internationally, but as Prof Yule says "You've got to have the right people with the right expertise to make it happen" and Massey has that expertise both in research and commercialisation to find a way forward".



	TRADITIONAL METHODS 2009/2010	PASTURE METER TECHNOLOGY 2009/2010
Average NZ dairy farm effective area ^(a)	126 ha	126 ha
Number of cows ^(a)	351	376
Stocking rate	2.79 /ha	2.98 /ha
Average production per cow ^(a)	307 kgMS/Cow	307 kgMS/Cow
Annual feed requirement per cow ^(b)	5.5 T DM	5.5 T DM
Farm dry matter production	1931 T DM ^(c)	2066 T DM
Milksolids payout ^(d)	\$6.05 /kgMS	\$6.05 /kgMS
Milksolid revenue	\$651,930 /farm	\$698,364 /farm^(e)
Financial advantage from using C-Dax Pasture Meter		\$46,434

(a) New Zealand Dairy Statistics 2007/08; (b) Calculation based on 5.5T for 300 kgMS/Cow/Yr with 20% wastage (Dexcel, Feed Information Sheet); (c) Based on feed per cow requirement in (b); (d) Fonterra forecasted milksolid payout for 2009/2010. Statistics NZ; Excludes dairy company retentions and deduction for DairyNZ levy; (e) Measured increase (7.0%) in pasture utilisation using C-Dax Pasture Meter (Case Study: Lawrence, [2009]) utilisation calculations based on data from 2008/09 using Dairy NZ, Pasture Eaten Calculator v1.04

For more information about commercialisation contact the Massey Commercialisation Team
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MASSEY UNIVERSITY
COMMERCIALISATION

THE COMMERCIAL JOURNEY FROM LAB TO MARKET



IDENTIFY

Working with Massey University's New Zealand Centre for Precision Agriculture, Pasture Meter developers saw a gap in the market for a more efficient means of pasture measurement.

Traditional plate meters are manually operated, making them time consuming and prone to inaccuracy. In partnership with postgraduate students Rob Murray and Hayden Lawrence, Prof Ian Yule sought to create a more efficient measurement system that would enable farmers to make better-informed pasture grazing decisions.

The three co-developers knew their concept had potential, but say they could not have predicted the willingness of dairy farmers to adopt the new technology. Nor could they have predicted the outcome of a commercial partnership, which saw both Dr Murray and Dr Lawrence gain employment with C-Dax following the completion of their PhDs.

Prof Yule advises others considering commercialisation to ensure they bring in the right people. "You may have a brilliant idea, but if it's already been done there's no point pursuing it. Working with Massey allows innovators to identify and maximise commercial potential", he said.



PROTECT

Pasture Meter is heavily patented on a global scale to protect its revolutionary technology and design.

"It's important to realise that you can't do everything yourself. Massey has the expertise to negotiate agreements and find the most suitable commercial partner."

The three co-developers, Massey University and C-Dax collectively own international patent rights and royalty streams. Prof Yule credits Massey commercialisation experts with guiding the patent and commercialisation process saying, "It's important to realise that you can't do everything yourself. Massey has the expertise to negotiate agreements and find the most suitable commercial partner."

Massey University's New Zealand Centre for Precision Agriculture has an ongoing relationship with C-Dax. Maintaining this relationship provides access to opportunities for mutually beneficial research and development. It's a link that Dr Murray, now Product Development and Innovation Manager at C-Dax, describes as "vital in driving innovation in the farming industry and making new technology available to farmers".



MARKET

C-Dax specialises in the manufacture of innovative spread, spray and measurement solutions and were considered by the developers to be a natural Pasture Meter partner.

Once contacted, C-Dax immediately saw the potential of Pasture Meter technology and how it fitted with C-Dax objectives. An initial agreement was made, but Prof Yule says Massey's involvement made the process of establishing a commercial agreement a lot clearer for all involved.

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Pasture Meter is now being sold internationally and strengthening C-Dax's position as innovation leaders. It has since been developed to incorporate GPS and information technology, enabling full integration with LIC FarmKeeper software for ease of record keeping, comparison and forecasting. C-Dax's core technology has been enhanced and a single console has been developed with the ability to control Pasture Meter along with other accessories within the C-Dax range.

C-Dax saw potential not just in the product, but in the people as well. Dr Murray has seen it from both sides saying, "the commercial partnership and ongoing support from Massey has enabled us to make revolutionary technology available to farmers throughout New Zealand and the world".