

Welcome

to the Autumn 2010 edition of our *E-Newsletter*, which provides up to date information about our business activities and the global development of Precision Agriculture.

This is our first newsletter and we want these updates to be interactive among our membership which already spans across five countries. Please send us any photos or videos of your precision agriculture experiences and we will add it to the next newsletter, or our website.

If you also have any questions regarding Precision Agriculture you would like answered, then please write to: info@precisionagriculture.com.au

Our sincere thanks to everyone who has supported the early development of our business. We are experiencing strong growth throughout Australia and are currently investigating opportunities to build our capacity.

Our business philosophy is to collaborate with key industry stakeholders in order to deliver a professional service tailored to individual clients.

We look forward to working with you!

Kind regards, Tim & Andrew



www.precisionagriculture.com.au

ABN 61 567 291 569 ACN 132 568 784

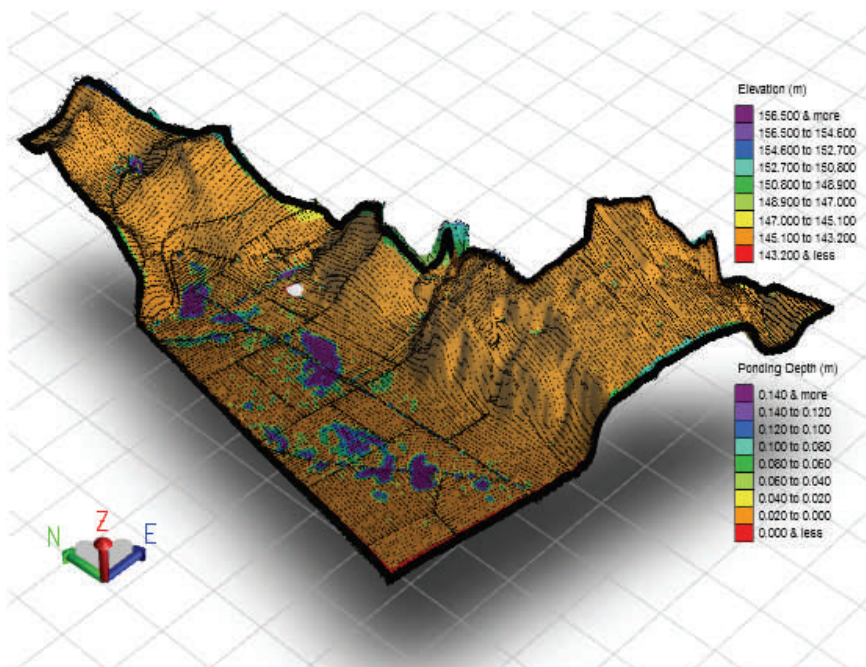
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Smart Drainage Designs

We have recently begun working with OptiSurface Designer software to develop efficient surface landforming designs for irrigation and dryland agriculture. We see huge potential for this software in areas prone to water-logging and water erosion.

With all the recent rain we have been busy developing these drainage designs which ranges from a comprehensive cut and fill to basic designs with direction of run and location of key drains.

Data captured from farmers' autosteer systems has become a very popular method of collecting the topography data which we can convert into a contour map and then a drainage design. There is however an advantage of getting a contractor to map critical areas as they can map the non-arable areas such as bottom of drainage lines and flow levels of dams & culverts.



Example of a property in Victoria with a 10cm ponding analysis wrapped over a 3 dimensional topographic model

Our drainage designs can include:

- Direction of run
- New paddock design
- Location and depths of drains
- Assessment of slope to determine suitability of raised beds
- Contour bank design

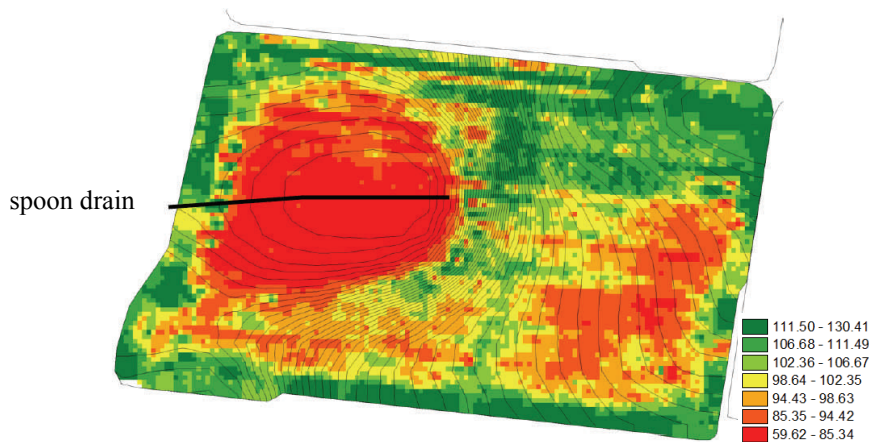


Capturing the Low Hanging Fruit

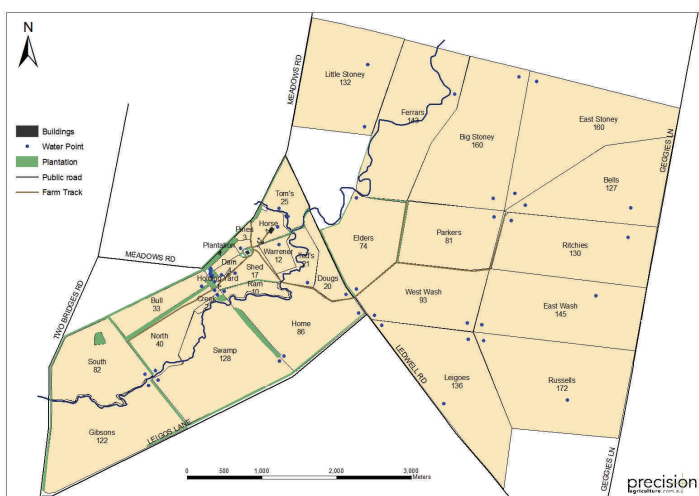
Variable rate applications are a management tool rather than a complete system, which relies on a solid foundation of crop agronomy. Our experiences indicate that the full benefits of site specific crop management can only be exhausted through partnerships with the farmer and their agronomist. With this approach we can quickly identify the *low hanging fruit* to generate a healthy return on investment in PA technology.

The more data you collect the more information you have to make informed decisions. We begin our analyses with a focus of determining the paddocks key limiting factor.

Normalised yield map (2004&2007) with 10cm contour overlay



For example this paddock's key limiting factor is poor drainage. Our first action is to cut a spoon drain into this low-lying and then monitor the yield response. After managing this obvious limiting factor (waterlogging) we can then turn our attention to other poorer performing areas.



Another example of low hanging fruit is value adding to the paddock boundary files collected by most autosteer systems.

With a little bit of farmer cooperation we can quickly convert them into a digital farm map with accurate paddock sizes for the office, ute or contractors.

Controlled Traffic in North Queensland horticulture “not that difficult”

Up until now, farmers on the Atherton Tablelands have thought that minimising tillage and implementing controlled traffic was too difficult due the wide range of crops that are grown in the area.

But recently Tim was in the district to present a workshop organised by Growcom, and funded by the Federal Governments’ Reef Rescue program.

After looking at farmers’ machinery, we were able to determine that there is a good chance that we can match all machinery wheels to form a controlled traffic, minimum tillage system.

Potatoes, sugarcane, peanuts, corn, and grass (for hay and see production) are grown in the area. Each crop typically has its own suite of specialised equipment.

Controlled traffic is all about minimising soil compaction from machinery wheels, and due to the amount of rainfall that farmers in North Queensland “normally” expect, the fertile red soils of the area are often driven over when they are wet.

Working on a 1.8m “bed” system, we think we can reduce the compacted part of the paddock to around 25%, when at present compaction in potatoes can easily exceed 100% each season.

The good thing is that we can do controlled traffic with current equipment, which means farmers don’t have to spend much money – maybe a little time - to obtain the benefits of the system.

The workshop was hosted at the Poggioli’s farm at Tolga. Workshop participants were able to see the rip/strip one-pass preparation machine, which has reduced time considerably.

Ben Poggioli commented “in one paddock we measured a 20 hour reduction in the time needed to prepare for planting – and that’s a lot of diesel as well!”



Training Courses

FarmReady Workshop Precision Agriculture: Introduction to variable rate & spatial data management

This workshop is targeted for growers interested in PA, but are seeking direction to get started. We cover all key aspects of PA including collection and utilisation of yield maps, applications for satellite and proximal crop sensor imagery, virtual tour of FarmWorks software, conducting on-farm trials to understand spatial responses.

We offer this workshop throughout Eastern Australia with a minimum number of 10 applicants. The workshop costs \$330incGST which is refundable through FarmReady (FRTC00495). www.farmready.gov.au

On-line FarmReady Workshop Precision Agriculture: Introduction to variable rate & spatial data management

The content of this workshop is the same as the face-to-face workshop, however we run it as an on-line training option. The course is delivered as three 1.5hr sessions, which can be delivered at timings which suit the group.

We offer this workshop throughout Australia with a minimum number of 5 applicants. The workshop costs \$330incGST which is refundable through FarmReady (FRTC00682). www.farmready.gov.au

Introduction to Precision Agriculture & CTF for Advisors

In-house training and user manuals tailored to suit individual businesses. Training includes overview of GPS guidance systems, crop scouting with a hand-held GPS, implementing on-farm trials with PA tools and handling yield data.

Please contact us if you would like to enquire about running a workshop in your area: info@precisionagriculture.com.au



2cm GPS without buying your own base station – is that possible? ”

If you farm in Southern Queensland, you can now obtain a highly accurate Real Time Kinematic (RTK) correction signal for your tractor auto-steer system without the need to buy your own base station.

This is achieved by the recent roll-out of what's called a CORS network, which stands for Continually Operating Reference Stations.

The CORS network provides real time corrections in an open, standard format. This means that almost any type of RTK receiver can connect in. Currently manufacturers deliberately scramble their signal in several ways to prevent use by other people.

There has been massive over capitalisation in the agricultural industry with RTK base stations, with an estimated 5000 base stations now operating in Australia alone.

Normally, a GPS auto-steer system relies on a base station in close proximity to keep the tractor on-line. CORS now enables connection of a tractor to a network of base stations, which are strategically located approximately 70km apart.

Because the CORS network is using up to 6 base stations around the district to provide a correction for you, if one fails, then you can still continue working. It also means that you can travel across Southern Queensland and still get high accuracy signal without taking a base station with you, thereby reducing your set-up times, and ensuring repeatable accuracy.

As you don't need to buy your own base station, CORS reduces the up-front cost by up to around 90%. There are fees to access the CORS network; however these have been priced in line with market expectations.

CORS is being operated through a public/private partnership, so you can be assured that accuracy and reliability are of paramount importance.

Commercial application of CORS in Southern Queensland has been tested on Trimble and Leica mojoRTK systems. We are also keen to hear from anyone that wants to test other types of RTK auto-steer as well.



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