



on track to improved profit and lifestyle

CTF UP-2-DATE *newsletter*

Mar - Apr **CTF Solutions team highlights**

- *We spoke at several Conferences and Meetings - Queensland Farmers Federation Conference at Coolum, GRDC Precision Agriculture Initiative meeting at Geelong, No-Till Conference at Tamworth, High Rainfall Zone meeting at Adelaide and a field trip/symposium held by the Australian Society of Soil Science at Dalby.*
- *We held workshops – two for our Condamine Alliance project on Sustainable Farming Systems for the eastern Darling Downs, satellite imagery for cane growers in Mareeba, a field trip for growers from the eastern Darling Downs to growers in our Fitzroy Basin Association project at Wowan and introductory workshops on Precision Agriculture for growers and advisers in Biloela and Emerald.*

Bus trip to Central QLD for eastern Darling Downs farmers

In late April, **CTF Solutions**, with support from Condamine Alliance, ran a bus tour for 11 eastern Darling Downs farmers. The growers visited Controlled Traffic Farms in the Don River (Wowan-Dululu) area in central Queensland (CQ). Some of the CQ farmers visited have been in CTF for 10 years. They provided valuable insight, knowledge and experience for the eastern Downs growers, who have not yet widely adopted CTF.

The CQ farms were an excellent example of successful CTF systems for the visitors as they are relatively small farms with similar grain cropping, irrigated lucerne hay, and cattle production interactions. This bus tour was part of an ongoing project being conducted by **CTF Solutions** for Condamine Alliance, which aims to achieve wider adoption of more financially and environmentally sustainable CTF systems in an area with many challenges.

Delivery of imagery to Tableland cane farmers

IKONOS imagery, captured on March 16 (just 3 days prior to Cyclone Larry) was delivered to cane growers located southwest of Mareeba. The imagery showed a number of production issues including:

- typically variable soils, ranging from light sands to heavier clays, with sodic areas
- generally more even crops under sprinkler irrigation compared to flood
- cane varieties are very different and clearly defined
- some trials of new practices – grain and fodder legumes as break crops, compost, beds for break legume and direct drill cane
- some waterlogging (often from springs due to geological dykes in the landscape), grub damage, harvest damage causing gaps, lodging
- large loss of plant crop due to heavy August rain

- historical management, rice bays pulled out in 1992.

On-farm R&D for CTF Don Yule

There is very little R&D being done across Australia for and in CTF systems. CTF is not a priority for funding agencies, something we expect ACTFA will address. There is some R&D on raised beds in Victoria and WA, and trials in Queensland, mostly in cane, a small effort for the farming system that is the foreseeable future of cropping. Across all industries, there are enormous challenges to optimise the farming system on non-compacted and non-waterlogged soils and to maximise the benefits of new technologies. There are issues with rough wheel tracks and wheel track erosion, and layout designs in some landscapes.

The answer lies in our process of CTF adoption – talk to us and farmers who have done it, and then “have a go” at home. In other words, growers have done their own R&D and growers have found solutions for past issues.

Now, our new technologies provide an exciting development - growers can do their own agronomic R&D using the precision of CTF to plant and record accurate strip trials and the high precision tools of satellite imagery and yield monitoring to measure the results. These trials measure both the response to applied treatments and the response across inherent farm variability (soils, slopes, past management). The results are relevant and applicable within your farming system, and immediately useful.

We encourage growers to keep a list of ideas or practices that could make a big difference for you, and then we will help you design and install trials to see if it will work on your farm. So, it is easy but you need to do it correctly. The whole thing should be only a small addition to your usual farm operations. And we can help with the data collection and analysis.

An example - Nitrogen Management in Qld to increase harvest index and reduce costs.

For many years simple trials such as varying fertiliser rates have been conducted to optimise both the timing and the rate for individual crops and soil conditions. With the availability of precision agriculture tools, there is great opportunity to increase the harvest index of the crop, lower costs and increase yield. This winter, Russell Taylor (from Warra on the Darling Downs) is using basic precision agriculture technology to conduct an on-farm research trial.

Russell's main objective is to identify nitrogen timing and application strategies to better manage the crop canopy. The aim is to match canopy size with yield potential as defined by water availability – thereby to increase grain yield per mm of water. If the season turns out to be above average, then nitrogen fertiliser will be added in-crop to match the nitrogen demand of the crop. If the season turns out to be below average, then large amounts of additional nitrogen will not be required; thereby reducing the cost of production.

Soil tests were made and residual nitrogen in the soil was 50-60kg/ha. Nitrogen requirement for optimal yield and protein target was calculated. The trial treatments are:

Treatment	Description
T1 (Control)	Full crop N rate applied at planting (normal application practice)
T2	Nil N applied
T3	½ rate at planting, ½ rate when crop is at a certain growth stage (GS30 – 33 in Zadok's Cereal Growth Stage Key)
T4	Nil N applied at plant, full rate applied with rain (before/after significant rain) possibly at around GS30 – 33.
T5	½ rate at planting, ½ rate with rain.

With the assistance of Russell's 3m/9m CTF system, the additional nitrogen, as urea, will be applied in-crop in 30" rows

using the air-seeder. Yield monitoring data will be used to analyse the responses, taking out residual head-land errors. While the research trial seems basic, the use of yield monitoring is one example of a precision agriculture tool that provides an easy and effective method for recording and analysing differences across the paddock. The result is more accurate information on nitrogen applications, lowering of costs and a step towards increasing the harvest index.

For more information, please contact **Blue or Tim**

Eastern Wheat Growers

A number of wheat growers in the eastern states has formed a group called "Eastern Wheat Growers." They are inviting growers from Queensland, New South Wales, Victoria and South Australia to join. The group formed, due to concern about the lack of transparency of the governance of the wheat export monopoly, the rising costs to manage the National Pool, and the relevance of an export wheat monopoly for the eastern states. The membership fee is \$250. For further information or to join, contact John Hamilton, Inverleigh, Vic (0409 955503).

May -June, CTF Solutions Activities

- **CTF Solutions is delivering precision agriculture GIS training to Queensland Department of Primary Industries staff as a collaborative project to help educate staff in precision agriculture GIS analysis techniques.**
- **CTF Solutions is visiting NSW growers to conduct on farm audits, discuss yield monitoring data and plan winter programs.**
- **We are increasing our computer power with a new server to more efficiently analyse the large GIS data sets and to improve our business practices**
- **We are testing GIS based computer packages for on-farm suitability and supporting developments in GPS networks and shared base stations. We will update in the next Newsletter.**
- **Jeff is visiting China for his University of Queensland project**
- **Don and Rose are holidaying in Japan with their son Hamish**

CTF Solutions is a grower-orientated organisation. We need your support and input to provide the service excellence that we strive for.

Please contact us with your comments and ideas. This is your Newsletter, please tell us what you'd like to see more (or less) of!

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