



Research in Horticulture

What's Happening in the Burnett Mary

Region, Queensland

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you by:



IMPORTANT NEWS:

- The ERF has passed through the Senate (Oct 31 2014) and projects can now pre-register with the CER.
- The Government has allocated \$2.55 billion in the 2014-2015 Budget for projects that reduce emissions at lowest cost.
- New methodology released July 2014: *Sequestering carbon in soils in grazing systems.*

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Carbon Farming - it's just farming....

The Carbon Farming Initiative (CFI) is a voluntary carbon offsets scheme that farmers and landholders may choose to take part in.

Under the CFI it may be possible to earn carbon credits from activities including:

- Reducing livestock emissions
- Increasing efficiency of fertiliser use
- Enhancing carbon in agricultural soil
- Storing carbon through revegetation and reforestation

To take part in the CFI farming activities either sequester (store) soil carbon or mitigate (reduce) emissions under proposed methodologies which follow strict operating and reporting protocols.

Carbon credits earned under the CFI are called Australian Carbon Credit Units (ACCU's) which may be sold to people and businesses wishing to offset their emissions.

Farmers and land managers must make informed decisions on whether the CFI is right for their farming operation.

For more information visit:

<http://www.climatechange.gov.au/reducing-carbon/carbon-farming-initiative/about-cfi>

BUT.....what if there's no carbon tax?

The Australian Government is committed to reducing its emissions by 5 per cent compared with 2000 levels by 2020 and will achieve this through its Direct Action Plan with the emissions reduction fund (ERF) at the centerpiece of the Plan.

CFI—ERF what's the difference?

The emissions reduction fund or ERF will build on the CFI by expanding the source of emissions reduction beyond the land sector. Through this fund industry may sell carbon abatement (ACCU's) back to the Government in a reverse auction mechanism to achieve the lowest cost per tonne.

Existing CFI projects will automatically be registered under the ERF with the Clean Energy Regulator (CER) responsible for approving methodologies and ensuring they support genuine and verifiable emission reductions.

For more information visit:

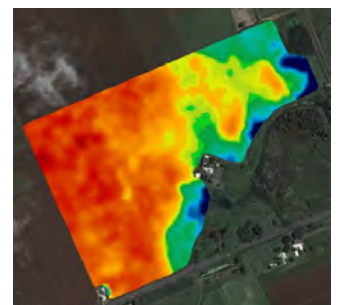
<http://www.environment.gov.au/climate-change>

What's going on below ground?

Paddock and farm zoning is a good starting point for growers wishing to expand into variable rate fertiliser technology. Soil mapping created by the EM38 machine is a reliable option for zoning paddocks according to soil type and potential yield. Electromagnetic or EM technology is suitable for use on any ground and is a non-invasive

measure of the apparent electrical conductivity of the soil to a depth of 2.75 metres through the use of sensors. BFVG has been utilising EM mapping on a number of properties in the Bundaberg Region.

For more information contact: bree.grima@bfvg.com.au



Farm mapped with an EM38. Source: B.Grima (Google earth), 2014



Show me the
money!

FtRG:

88 projects

\$74 million

AoTG:

89 Projects

\$44.29 million

N₂O

nitrous oxide



N₂O sampling prior to
planting the rock melon
crop 06/08/14

The Carbon Project

This newsletter is designed to provide information on research projects from the Action on the Ground (AoTG) and Filling the Research Gap (FtRG) funding rounds applicable to the horticulture industry with emphasis on those in the Burnett Mary Region. It is brought to you by Bundaberg Fruit and Vegetable Growers (BFVG) a non-trading, not-for-profit grower based cooperative comprising a membership base of horticulture growers and industry service businesses in the Bundaberg, Gympie and Gayndah Regions.



BFVG has partnered with Burnett Mary Regional Group for Natural Resource Management (BMRG) to deliver a federally funded project under the Extension and Outreach Program. This four year project commenced July 2013 and is committed to providing growers and land managers information on the Carbon Farming Initiative, greenhouse gas emission mitigation technologies and carbon sequestration opportunities.

Please contact me for any information on the following projects or for a one-one-one talk about opportunities in the CFI.

Email: bree.grima@bfvg.com.au

Cheers!
Bree



The Fruit Salad Project

Led by the Australian Melon Association the Fruit Salad Project focuses on the melon, blueberry and banana industries. Funded over four years this project will investigate the role of soil amendments including biochar and compost to increase soil carbon and reduce nitrous oxide emissions in those enterprises. Demonstration trials are established on farm sites in NSW and Qld with the melon

sites in Cowra, NSW and Bundaberg, Qld. The banana sites are located in Uralba and Tullera, NSW and the blueberry site in Brooklet, NSW.

Each site contains four treatments: involving fertilisation, biochar and compost additions. Soil amendments will be characterized at the beginning of the trial. Round static (PVC) chambers will be used for the nitrous oxide sampling to directly measure GHG flux.

Carbon sampling will be undertaken in the row area and analysed for total organic carbon. Grower knowledge will be used to assist in interpreting production output information.

For more information contact:
justine.cox@dpi.nsw.gov.au

This is an Action on the Ground project and is supported through funding by the Australian Government.



Fruit Salad Project - Bundaberg Trial



Stephen Ginns, Q-DAFF Bundaberg taking a nitrous oxide sample in the rock melon crop. Source: S.Ginns, 2014

The Bundaberg demonstration trial is well under way with the current rock melon crop planted early August 2014. Nitrous Oxide sampling will take place during the crop cycle. Following rock melon harvest the ground will be fallowed then planted with a zucchini crop in 2015.

The Bundaberg team are planning a field day during the zucchini crop to present data obtained to date.

For more information on this project contact Stephen Ginns, Q-DAFF at Stephen.Ginns@daff.qld.gov.au

This is an Action on the Ground project and is supported through funding by the Australian Government.

QUEENSLAND GINGER PRODUCTION

Improving soil fertiliser, soil and irrigation management in SE Queensland Ginger Production



This project will trial and demonstrate on-farm practices to reduce nitrous oxide emissions and increase soil carbon storage by trialling improved management of nitrogen fertiliser application practices including controlled release nitrogen (CRN) fertilisers and the use of compost in the production of ginger.

Further soil management trials include fallow and legume cover crop combinations, seasonal fallow rotations and minimum tillage options in the production of ginger at trial sites on four ginger farms in south east Queensland.

Comparisons will be made between standard farm practice

of overhead fertigation and the CRN treatment. Standard fallow and legume cover crop combinations will be tested with seasonal fallow rotations and minimum tillage options to increase soil carbon in the production of ginger.

For more information contact: Zane.Nicholls@daff.qld.gov.au

This is an Action on the Ground project and is supported through funding by the Australian Government.



N₂O Chamber with sampling apparatus. Source: Z.Nicholls, 2014

STRAWBERRY & PINEAPPLE RESEARCH

Improved fertiliser and soil management in south east Queensland intensive horticulture

This project is trialling and demonstrating reduced tillage practices, use of legume fallow crops and soil organic amendments to reduce nitrous oxide emissions and increase sequestration of soil carbon in association with the production of strawberries and pineapples in Queensland. Comparisons in the strawberry production will be made between standard farm practice of drip fertigation

and the CRN treatment on two sites on the Sunshine Coast, Qld in 2013 and 2014. The pineapple trial will use 50% CRN over four months as a pre-plant and or side dress application. There are 10 trial sites on the Sunshine Coast for the pineapple project which will monitor plant and soil nutrient levels over three planting windows in 2012, 2013 and 2014.

For more information contact:

Zane.Nicholls@daff.qld.gov.au

This is an Action on the Ground project and is supported through funding by the Australian Government.



Strawberry runners with N₂O chamber
Source: Z.Nicholls, 2014

**CRN =
controlled
release
nitrogen
(fertiliser)**

CROPPERS IN THE BURNETT

Trialling soil amendments and pulse rotations to reduce nitrous oxide emissions



Based in Monto, Qld this project is trialling the use of legume crop rotations and composts to reduce N₂O emissions, improve soil health and increase productivity.

The project will trial, measure and demonstrate the integration of legume crops in cereal crop rota-

tion, the inclusion of soil amendments, minimum tillage practices and the use of nitrification inhibitors.

The project will capture data on land use history and production information providing local croppers with tangible data and agronomic advice. On-ground work commenced with two landholders in January 2014.

For more information contact:

Michelle Haase (07)
41812 999 (ext 122)
michelle.haase@bmrq.org.au

This is an Action on the Ground project and is supported through funding by the Australian Government.



Nitrous oxide chambers in the cropping trial.
Source: Prof. Phil Brown CQUniversity, 2014

Bundaberg Fruit and Vegetable Growers

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The Carbon Farming Project is an Australian government funded project from the Extension and Outreach Program which forms part of the Carbon Farming Futures package. This project is a joint collaboration of the Burnett Mary Regional Group, Bundaberg Fruit and Vegetable Growers, Burnett Catchment Care Association and Dairy Australia.



Bundaberg
Fruit & Vegetable
Growers



This project is supported through funding by the Australian Government.

Check out the many more AoTG and FtRG projects in horticulture

For more information on these and other funded projects visit:
<http://www.agriculture.gov.au/climatechange/carbonfarmingfutures>

AOTG = ACTION ON THE GROUND

FTRG = FILLING THE RESEARCH GAP

- * Horticulture: taking action to capture carbon and reduce nitrous oxide emissions – Applied Horticulture Research Pty Ltd (vegetable crops in NSW)
- * Nitrous oxide reduction and soil carbon increase in tropical fruit tree crops – Northern Gulf Resource Management Group Limited (Northern Qld)
- * Greenhouse gas abatement in viticulture – The Australian Wine Research Institute (winegrape growing regions across Australia)
- * Innovative biological farming systems – B.B Maurice and R.T Maurice (improved pastures and minimum tillage cropping practices in central NSW)

- * Enhanced compost trials on cane and tree crops on the Sunshine Coast – South East Queensland Catchments Limited
- * Reducing nitrous oxide emissions in sub-tropical plantation crops using inter-row legumes — Southern Cross University (avocado, tea tree and coffee)
- * Reducing nitrous oxide emissions from intensive crop production in the Ord River Irrigation Area — Living Farm Pty Ltd (WA)
- * Using nitrification inhibitors to mitigate emissions of greenhouse gases in sub-tropical horticulture — Queensland Fruit & Vegetable Growers Ltd (Southern Qld & Southern Vic.)
- * Compost and biochar amendments

for increased carbon sequestration, increased soil resilience and decreased GHG fluxes in tropical agricultural soils— James Cook University



*Nice view from the office!
 Pea and Oat fallow. Source: Z.Nicholls, 2014*