



Harden Murrumburrah Landcare

Group Newsletter

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March 2012

"A healthy and productive Murrumbidgee catchment and its communities working together – Yindyamarra"

Harden Murrumburrah Landcare Group Annual General Meeting Harden Country Club 8.45am Tuesday 27 March 2012

Speaker: Clive Kirkby, CSIRO Plant Industries

Topic: Nutrients – the real limit to building soil carbon

Clive Kirkby has been a soil scientist with CSIRO for more than 35 years based first in Adelaide, then Griffith and now in Canberra. Clive has worked on aspects of soil organic matter for most of that time in both native and agricultural soils and was involved in sampling the Harden long-term site in the mid 1990s. He remained puzzled as to why organic matter failed to build-up on the stubble-retained-DD treatments even after many years. This led him to develop his hypothesis that a lack of nutrients (N,P and S) and not a lack of residue (carbon) was a key factor limiting more C sequestration in soils – as stable organic matter (humus) is composed of all of these elements in predictable ratios. Clive has pursued that idea for his PhD studies through CSU while based at CSIRO in Canberra and has used the Harden site throughout the work. His PhD has been submitted for examination and papers have been submitted for publication as Clive continues to use the Harden site in his Postdoctoral work with CSIRO. Clive will give an overview of his findings and their importance in relation to building soil organic matter in light of the Carbon Farming Initiative.

Current committee is: Chair: Ken Clark, Treasurer: Mark O'Connor

John McGrath, Tim Condon, Paul Parker, Peter Holding, Simon Murphy, Rob Woodhead, Rob McColl, Ric Preston, Geoff Henderson, Bill Daly, Andrew King, Jim Ryan & Chris Coddington.

It is always terrific to have new people to support this team, please do not hesitate to nominate to support them.

Updating Greening the Grainbelt Species (Tree/shrubs) List *This project will develop a native species planting list for our area so as to encourage the community to commit to reversing the long term decline of native vegetation, both in terms of area and diversity. Landholders who have undertaken plantings in the last decade where consulted to compile information on species diversity and associated rates of attrition. The Australian National Herbarium has been consulted to assess the relevance of this data and then provide advice so as to adapt the information into a more user friendly format. The information for each species on the list shall then be expanded upon so as to allow species selection for planting based upon land type, climate, soil condition et cetera. Options for providing this list as community web-based application will also be considered to distribute the data as widely as possible enhancing community awareness of the species suitable for the region. (Project plan)*

The project was successful in gathering background information from landholder sites planted over the last decade. Where possible species lists of plantings were obtained from nursery invoices to allow for estimates of survival rates. Landholders encountered difficulties identifying species to greater resolution than genus level. Consequently, the Australian National Herbarium organised a field trip with summer interns to address this issue. The field trip focused on select sites where students identified planted species and recorded numbers of surviving plantings. It also provided an opportunity to test field keys generated by the Herbarium for the identification of plants by landholders in revegetation areas. It is planned to repeat the field trip on the remaining sites in succession over subsequent years. To improve access to information such as the species list, site details and related planting information, we have built a Wiki. This incorporates into the species list the capacity for collaborative compilation of details of interest such as identification, environmental suitability for conditions such as salinity or water logging. It allows details to be cross referenced as it is compiled so that planting sites can be cross referenced with species. That way as data is collected for plantings it will enhance the value of the species list by showing real examples of the suitability of any given species in the list. This will in turn allow landowners to make better informed decisions with respect to species selection for revegetation. Extra reporting functionality is anticipated to add considerable value by creating dynamic reporting features to interrogate and visualise the data.

HMLG thanks the many members who completed the survey of existing plantings that provided the base data for this project.



This newsletter is a partnership between Harden Murrumburrah Landcare Group, Binalong Landcare Group, Harden Shire Council & Murrumbidgee Catchment Management Authority



Alternative Fertiliser Trials Update

Binalong Landcare and NSW DPI, Yass, have successfully completed the third year of pasture and soil monitoring on the alternative fertiliser trial sites in the Binalong and Bookham area.

The trial work began in Nov 2008 when baseline soil test measurements were taken. Since then we have measured pasture biomass and soil chemical and biology levels for the last three years following the various fertiliser treatment applications each autumn. The results collected for the first two years indicate that alternative fertilisers can have an impact on soil nutrient status and spring herbage mass. Products like single super, agriash, pig manure, YLAD compost mineral blend and BioAg Blend have already shown some positive increases in pasture growth. We are aware that some products may take a number of years to induce change hence it is important to continue monitoring the trial. Increases in spring herbage mass under some treatments appear to be highly correlated to increases in soil phosphorous and sulphur as these are two of the most limiting nutrients. In spring of last year we also collected a full set of pasture quality data across all treatments at the 3 sites.

Spring 2011 pasture and soil samples are currently being statistically analysed by a biometrician. We will not have final results for the public until sometime in autumn 2012, with a field day to be held to present the 3 years worth of results sometime in late autumn. We plan to continue the trial for a further 2 years where we will continue to measure spring pasture biomass. Depending on further funding availability, we may try and do some more soil testing in 2013.

Fiona Leech, District Agronomist, Yass. 62262199

HMLG Moisture Meter update

Due to unforeseen technical hitches, the meters have not been installed in 2011 it is anticipated they will be operating by sowing in 2012.

International Women's Day will be celebrated with a dinner on **Friday 23 March, 2012** at the Harden Country Club commencing at **6.30pm** with guest speaker Cr Lorraine Kelly from Sutherland Shire, a sister city for Harden Shire. Lorraine will speak about her experiences as both a Councillor and Mayor and the relationship between the two shires.

The evening is supported by Harden Shire Council and NSW Premier & Cabinet Office for Women's Policy. from Orders and sales on the night from Undercoverware and Country Heartstrings, will benefit Harden CanAssist.

The **Inspirational Woman of the Year for Harden Shire** will also be announced. Nomination forms can be found on Council's website or at the office in East Street, Harden. Nominations close on Monday 19 March 2012.

Places are strictly limited and bookings are essential with Council's customer services on 02 6386 0100. Cost: \$5

Murrumbidgee CAP Update

The Murrumbidgee Catchment Management Authority invites the local community to get involved in developing the next generation Catchment Action Plan (CAP). The Catchment Action Plan is a vision to help us understand our catchment and work together to build a resilient landscape.

The Murrumbidgee CMA is developing a new plan as a response to new knowledge, evolving policy and community values, and emerging issues such as climate change. The Murrumbidgee CMA is providing the community with many opportunities to get involved in upgrading the CAP.

- Visit our website www.murrumbidgeecma.nsw.gov.au and put your thoughts on our blog
- Email yourcap@murrumbidgee.cma.nsw.gov.au
- Call us on 1800 BIDGEE (1800 243433)

Managing vegetation to boost productivity and sequester carbon

This project will analyse the carbon dynamics in the Binalong Landcare district as an NRM tool for mitigating change, boosting ecological sustainability and increasing the economic productivity of the region. It aims to provide reliable estimates of carbon emitted into the atmosphere and sequestered in local biomes and soils, resulting in a brochure describing the carbon dynamics, relating them to Murrumbidgee CMA objectives and giving examples of carbon management at the community level.

The project will demonstrate how to improve soil health, enhance stream and river health, reduce dryland and stream salinity and boost local biodiversity.

This project is funded by the Murrumbidgee CMA Community Partnerships Program.

Exploring soil variability pH & total carbon

Harden Murrumburrah Landcare Group (HMLG) - younger farmers - have successfully obtained funding to ground truth a method of 'on the run' testing for soil pH using a VERIS soil pH-Detector with the aim of understanding variability in pH across a paddock. HMLG propose to validate the system for use as a cheaper method of soil testing and understanding paddock variability in the Jugiong Creek Catchment.

Traditionally, blanket rates of soil ameliorates such as lime are applied which treat the average pH of soils. Should this process prove to be accurate it will allow exact applications of accurate rates, improving soil properties, reducing environmental impact, addressing acid soils and the possibility of reducing input costs as the whole paddock may not need to be treated with the same rates.

Questions to be asked of the data include:

- * How accurate is the pH detector compared with traditional laboratory analysis?

Project targets = 3 lab tests at each site/zone tested by the probe

- * Is the technology suitable for a range of soil types and conditions?

- * soil testing using the TOC (LECO) method – total organic carbon



It is anticipated that the soil tests taken to verify the mapping will also be tested for total soil carbon to provide a bench mark of total soil carbon against current land management practices to assist land managers understand the variability of soil carbon at this point in time under current land management practices.

The pH Detector is mounted on a quad bike which is also equipped with a GPS unit. The soil chamber is pushed into the soil (depth of approx 10cm, depending on soil conditions) and then the soil pH sensor is inserted into the chamber. The sensor gathers a soil pH value reading after approximately 5 seconds, the sensor is removed from the chamber and washed. Finally, this data is stored on a data logger along with the GPS coordinates, enabling the creation of soil pH maps.

Demonstration of this machine may be viewed on YouTube <http://www.precisionagriculture.com.au/variable-rate-applications.php>

The physical testing will be within the zones identified by the mapping to ensure that the zoning is correctly calibrated.

The soil tests taken to ground truth the data will also be tested for total carbon using the TOC (LECO) method as recommended by Mark Conyers, Principal Soil Scientist with Dept of Primary Industries.

The management committee for this project includes: Ken Clark 0429432688, Adrian Roles 0488438210, Rob McColl 0429 867210, Sarah Sims, Jane Worner & Andrew Finch. Please do not hesitate to contact any of the committee should you want further information. This project is an initiative of the HMLG younger farmers group & is funded by the Murrumbidgee CMA Community Partnerships Program.

If you would like to be part of the 'Younger farmers' group (a loose definition!), have a son/daughter/employee recently returned to the farm or know of a 'younger' person who may not be on our mailing list and would like to be included in this group please do not hesitate to pass on their details to a member of the Committee.

The group are planning several field days this year including a succession planning workshop, exchanging management ideas and technologies farm walks.

CROSS SLOT NO TILLAGE — On Farm Demo with John Baker

Friday 16th March 9am to 11am at 'Berthong', Wallendbeen

(Burley Griffin Way between Wallendbeen & Stockinbingal, turn right Berthong Road, 8km on the right)

The Cross Slot Seeder was the Henty MFD Machine of the Year 2011.

Contact Andrew Crawford 0428 432 218 for further information.

GRDC—Farm Business Management Update for Growers

Temora Ex Services Club—Wednesday 21 March 9—3.30 Cost \$40 bookings 03 54416176 or admin@orm.com.au

Speakers include: RPatterson, enterprise mix; P Ridge, what are land values doing; K Roberts, smart technology to improve farm management; J Harris, Tax effective debt reduction strategies; E Lawrence, Health & well being.

Dates for your diary

NSW Renewable Energy Precincts will be holding a LISTENING POST at the JUGIONG HALL

Thursday 22 March - 4pm to 7pm

We are keen to hear your views about renewable energy projects (wind towers) in the area and how they might affect you, your family and friends. We will also try to answer any questions and will have a variety of information resources available.

Contact: Chris Mackenzie Davey 0457 593 266

Chris.mackenziedavey@environment.nsw.gov.au

Let us know...

If you are interested in receiving regular updates about field days, training courses, funding opportunities or Landcare activities via email, please send a request email to:

Louise.hufton@cma.nsw.gov.au

www.murrumbidgee.cma.nsw.gov.au



If undeliverable return to:
Murrumbidgee CMA
Natural Resource Officer
PO Box 145
HARDEN, NSW 2587

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OUR
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Murrumbidgee Catchment Management Authority

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