It is quite obviously a bumper season for all things green (including grasshoppers) and many people have been taking advantage of the conditions to plant trees. Windellama Primary School and Windellama Landcare joined forces and put in 200 eucalypts along the creek line behind the school. The kids had a fantastic day and each and every one of them now knows exactly how to care for a young seedling.

Nerriga Landcare president Di Roberts has put in a huge effort in the last month by organising very traditional Landcare planting days where members and non members and people from neighbouring groups got together to help each other. In this case it was newcomer Mark Tisdell realising a dream of planting out his gully at Tomboye, achieving better water management and erosion control, eventually creating a wildlife refuge.

Windellama Landcare have just put in a couple of hundred more seedlings at Oallen Ford as the next step in the process of stabilising the dune that they have been actively protecting over the past 12 months.

Mongarlowe Landcare, with Mr Paul Dann on the mattock, have put in a few trees on Tantulean Creek.

Veteran tree planter Geoff White, from Braidwood Rural Landcare, has recently completed another of his impressive plantings at his property ‘Mundango’. Geoff and Sally are effectively creating stepping stones for wildlife (particularly birds) to find refuge in the vastly cleared landscape of the Braidwood Granites. Having these birds housed on your property can be very useful when it comes to controlling pests such as grasshoppers (or locusts if you want to get biblical!).

Windellama Primary School children pitched in with gusto to plant around 200 trees in September.

The final day of planting at Tomboye. Great work everyone.
From page 1. tree planting cont..................

Water crystals

There are varying approaches and opinions about the use of water crystals when planting native trees. My belief is that they are very useful in helping a plant get through the shock of being transplanted and very useful in helping trees survive in a dry season. There are problems with water crystals but in my book that is because they aren’t used properly.

Firstly hydrate your water crystals fully in a bucket of water. You will only need around a cup of dry crystals per 20 litre bucket. Let them expand to their full capacity (up to 1.5cm diameter). Mix a small amount (2-4 tablespoons) into the dirt at the bottom of the hole you are planting into. Then the seedlings will have a source of water that is enough to support them in the transition to their new living arrangements but not so much as to restrict the development of a long and stable tap root. Avoid the crystals with fertiliser when planting natives - they only encourage weeds, and NEVER apply the water crystals dry. It’s a big waste of time and effort when the rain comes and the dry crystals expand and all your seedlings pop out of the ground.

Editorial

Lower Shoalhaven and Upper Deua Landcare AGM & XMAS Party

The Upper Shoalhaven & Upper Deua (USUD) Landcare Network is having their AGM on the 10th of November, 2010. This year the meeting will be held at the Windellama Hall and Windellama Landcare will be giving a presentation on all that they have been up to this year.

LANDCARE XMAS PARTY

Lock Friday the 10th of December into your diaries for the annual Landcare Xmas Party to be held at the Garanvale Woolshed in Braidwood. The Xmas party is also the best opportunity for acknowledging the efforts of a great variety of stand-out Landcare efforts over the past year.

The entertainment is yet to be announced but bring your dancing shoes!
The Upper Deua Landcare Group (UDLG) has a history of high membership and bold projects and their latest venture is more of the same. Upper Deua Landcare was formed in 1996. Membership of Upper Deua Landcare Group also includes membership of the subcommittee, the Araluen Catchment Water Users Association (ACWUA).

Since its inception, UDLG has done some significant work. One major project was the Araluen Streambed Controls Project which kicked off in 1998 with a small amount of Rivercare funding. Over the course of the project, streambed controls were carried out on 27 sites along the Araluen Creek. Five piezometres where installed, revegetation and fencing works and weed control were completed, and over $100,000 was managed by the group with around 3500 working hours contributed by members.

The Araluen Creek is home to a mammoth infestation of small and large leaf privet (Ligustrum sinense and Ligustrum lucidum), known to be a seriously invasive weed in the lower reaches of the Deua River and obviously (see picture right) capable of overrunning the native vegetation of Araluen Creek.

In a continuation of the Upper Deua Landcare group’s commitment to bettering the environment of the Upper Deua Catchment, the group has put in an application to the Australian government for a Community Action Grant so that they can tackle this major weed problem and continue their amazing contribution to the health and wellbeing of Araluen Creek.

**President:** Don Collet 4846 4085  
**Secretary:** Cath Harrison: 4946 4005

New members are always welcome and encouraged. The group meets regularly - for dates contact the Secretary.

**Nurseries and tree planting classifieds**

If you want to advertise in the classifieds contact Felicity on 4942 4594.

**Tree Planting Contractors:**
Matt Flack in Braidwood- 0417 422 392

**Tree Suppliers:**
Currajuggle Creek Nursery - 4842 8066  
Trentham Native Trees - 0408 032 815  
Wariapendi Nursery - 4889 4327

**Chee Dock Nursery**
Call James Cook - 4842 8084
Advanced Coorang Pines: 8inch pots $16ea  
*Lomandra longifoliar:* $1.60/tube
Southern Rivers CMA partnered with the Department of Industry and Investment to roll out a project called Bringing Back The Fish to restore fish passage and key habitats along the length of the NSW coast. The project was the largest of its kind in Australia opening up over 1,200km of habitat for migrating fish through the rehabilitation of nearly 100 sites. Consequently, the project won the 2010 Banksia Award for Water, a prestigious environmental prize. The Banksia Environmental Foundation recognises that in Australia water quality and flow, and native fish stocks have been decimated by the construction of over 10,000 barriers such as weirs, causeways and floodgates.

Bourke’s Crossing on the Mongarlowe River was just one of the sites that got the fish friendly makeover. The work (which was managed by Palerang Council) involved the replacement of three inadequate pipe culverts with larger box culverts. One was a low flow cell, one was a higher set cell on the main channel and one was a higher set cell located on the secondary flow path. This cell was designed to ensure lower velocities at higher flows.

Sarina Locke from ABC Canberra interviewed those directly involved with the project last Friday, and also took a special interest in the work of our own Friends of the Mongarlowe River (FMR) group.

The FMR are in the process of applying for a Fish Habitat Action Grant to address some serious erosion concerns further downstream on the Mongarlowe River.

For more information on fish friendly crossings there are some great publications. The Bringing Back The Fish report is sitting on my desk as I type, ‘Why Do Fish Need To Cross The Road?’ from NSW Fisheries is also available at their website (www.fisheries.nsw.gov.au), and from the DPI and the Environmental Trust in 2006 we have ‘Reducing the Impact of Road Crossings On Aquatic Habitat In Coastal Waterways - Southern Rivers, NSW’.

All are available to look at here at the Southern Rivers CMA Office in Braidwood, 42 Ryrie Street.
Join Peter Andrews, the Natural Sequence Farmer, and Martin Royds, Regenerative Farmer, to experience first-hand the “sequence” of Natural Sequence Farming.

Using compost to put fertility back into the landscape......Create the environment and the plants will arrive to do the job.

Changing the water cycle from “drainage” to rehydrating......Recreate a chain-of-ponds.

Using animals to process and move fertility from the creeks to the hills, stimulating the growth of plants...

Understand the importance of hydrating the landscape to create resilience through a 5 Point Plan:

1) Build biodiversity in soil, pasture and enterprise
2) Restore water table function
3) Create effective evaporation
4) Increase natural fertility cycling
5) Build soil carbon through use of plants and animals

RSVP by Nov 10: Lea Barrett, Secretary, Upper Shoalhaven Chapter ~ NSA
Tel: 0411892957 or email lea.barrett@bigpond.com
Wetland Care Australia has recently produced a report for the Southern Rivers Catchment Management Authority (CMA) called *Healthy Wetlands for Healthy Catchments in the Southern Rivers Region*. The purpose of the project was to compile existing wetland maps into one standardised map set using an easy-to-understand classification system.

There is currently no national standard for the definition and assessment of wetlands in Australia. Wetland Care Australia used the definition and latest wetland classifications applied by the Queensland Wetlands Program. They sensibly recommend in their report that *all CMAs and NRM’s in Australia use or cross-reference one typological (classification) system when mapping wetlands.*

In this report 17 different areas in the Upper Shoalhaven & Upper Deua (USUD) were included and classified. However, a key recommendation of the report was to *address the lack of wetland data available in the hinterland* (that’s us).

The classification uses four broad Classes which are:

1. Lacustrine - from the latin *lacus* of or relating to lakes
2. Palustrine - from the latin *palus* of or relating to a marsh
3. Estuarine - of or relating to an estuary - a word we are more familiar with. I’m guessing its latin!
4. Riverine - of or relating to a river.

Jembaicumbene Creek and McCarthy’s Creek (Jembaicumbene swamp complex) and the Nadgengutta Creek (Nerriga Complex) were mapped and classified and a site action plan was developed for them using Wetland Care Australia’s *Wetland Assessment Techniques Manual for Australian Wetlands*. It’s wonderfully comprehensive and available online (www.wetlandcare.com.au) or at the Southern Rivers CMA office.

**Other areas in the USUD that are now part of the data base are:**

1. Bungonia/Marulan South
2. Windellama
3. Boro Creek/Shoalhaven
4. Harolds Cross
5. Marvana Creek
6. Snowball
7. Shoalhaven River/Deua
8. Jerralong/Oallen
9. Nerriga
10. Curradux Swamp
11. Back Creek/Durran Durra

Above: A natural pond that isn’t fenced but has not been over-grazed thus keeping the vegetation around the pond intact.
Classification/Typology System used by Wetland Care Australia

<table>
<thead>
<tr>
<th>Classification</th>
<th>Sub-Classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lacustrine</td>
<td>1. Coastal/Sub-Coastal floodplain lakes</td>
</tr>
<tr>
<td></td>
<td>2. Coastal/Sub-Coastal floodplain lakes (modified)</td>
</tr>
<tr>
<td></td>
<td>3. Coastal/Sub-Coastal non-floodplain lakes</td>
</tr>
<tr>
<td></td>
<td>4. Coastal/Sub-Coastal non-floodplain lakes (modified)</td>
</tr>
<tr>
<td></td>
<td>5. Upland lakes</td>
</tr>
<tr>
<td></td>
<td>6. Upland lakes modified</td>
</tr>
<tr>
<td></td>
<td>7. Alpine lakes</td>
</tr>
<tr>
<td>Palustrine</td>
<td>1. Coastal/Sub-Coastal floodplain grass, sedge and herb swamps</td>
</tr>
<tr>
<td></td>
<td>2. Coastal/Sub-Coastal floodplain tree swamps</td>
</tr>
<tr>
<td></td>
<td>3. Coastal/Sub-Coastal floodplain wet heath swamps</td>
</tr>
<tr>
<td></td>
<td>4. Coastal/Sub-Coastal non-floodplain grass, sedge and herb swamps</td>
</tr>
<tr>
<td></td>
<td>5. Coastal/Sub-Coastal non-floodplain tree swamps</td>
</tr>
<tr>
<td></td>
<td>6. Upland grass, sedge and herb swamps</td>
</tr>
<tr>
<td></td>
<td>7. Upland tree swamps</td>
</tr>
<tr>
<td></td>
<td>8. Upland wet heath swamps</td>
</tr>
<tr>
<td>Estuarine</td>
<td>1. Estuary</td>
</tr>
<tr>
<td></td>
<td>2. Mangrove</td>
</tr>
<tr>
<td></td>
<td>3. Mud/Sandflats</td>
</tr>
<tr>
<td></td>
<td>4. Saltmarsh</td>
</tr>
<tr>
<td>Riverine</td>
<td>1. Riparian</td>
</tr>
<tr>
<td></td>
<td>2. River</td>
</tr>
</tbody>
</table>

General Wetland Definition

“Wetlands are areas of permanent or periodic/intermittent inundation, with water that is static or flowing, fresh, brackish or salt, including areas of marine water, the depth of which at low tide does not exceed 6 metres.”

Wetland Management

Wetland Management is largely the same as good riparian zone management. A healthy wetland is one that can support a self sustaining ecosystem - where a wide diversity of living organisms from soil biota to fish, plants, birds and mammals and reptiles, all support each other in an interdependent web.

An unhealthy wetland does not have the right balance of plants and animals and therefore has limited biodiversity, and limited capacity to maintain high water quality and offering food resources to species up the food chain.

Water is the common factor here - so good management of the aquatic ecosystem means cleaner water, more birds, more fish, more fringing and inundated vegetation.

You can probably guess that in a farming situation controlled grazing of large herbivores (sheep, cows, goats, alpacas camels, hippopotamus) around any wet area is going to be a major benefit straight away, largely because uncontrolled grazing by these animals does not allow diverse vegetation to thrive. Vegetation that grows in shallow water and on the edge of wet areas is a major source of food and habitat for in-stream organisms. It is also responsible for filtering impurities and excess nutrient from surface water runoff, bank stabilisation and as a buffer to reduce sediment loads from sheet and rill erosion reaching waterways.

Any standing water on your property that is protected from stock can quickly become a sustainable and productive mecca for frogs, water-fowl, tortoises, yabbies and even fish. Tall trees around the edge of a dam provide shade and sedges, rushes and reeds on the edge of a dam are habitat and food supply. Fallen timber and rocks in a waterway is a great way to provide habitat too.

You can probably guess that in a farming situation controlled grazing of large herbivores (sheep, cows, goats, alpacas camels, hippopotamus) around any wet area is going to be a major benefit straight away, largely because uncontrolled grazing by these animals does not allow diverse vegetation to thrive. Vegetation that grows in shallow water and on the edge of wet areas is a major source of food and habitat for in-stream organisms. It is also responsible for filtering impurities and excess nutrient from surface water runoff, bank stabilisation and as a buffer to reduce sediment loads from sheet and rill erosion reaching waterways.

Any standing water on your property that is protected from stock can quickly become a sustainable and productive mecca for frogs, water-fowl, tortoises, yabbies and even fish. Tall trees around the edge of a dam provide shade and sedges, rushes and reeds on the edge of a dam are habitat and food supply. Fallen timber and rocks in a waterway is a great way to provide habitat too.

go to www.wetlandcare.com.au for more....
PROGRESS REPORT
By David Hilhorst

Since December 2009, The Windellama Locals Linking Landscapes project has been going from strength to strength. The project combines the strengths of the Windellama Progress Association, and Windellama Landcare networks with support from Southern Rivers Catchment Management Authority. The community came together in February 2010, with 65 people attending a planning meeting where the seeds for a “Shared Landscape Vision” were planted.

Since then, 13 local landholders have received management plans for their properties, with seven landholders (a total of 511.5ha) receiving funds for works including: fauna friendly fencing, weed control, erosion control, grazing management for conservation outcomes, alternative stock water; paddock subdivision and feral animal control. These works were funded on a sliding scale (between 50 per cent and 80 per cent funded), depending on how well the plan met the objectives of the “Shared Landscape Vision”.

“The Locals Linking Landscapes project aims to achieve “landscape relevant” outcomes. This requires co-operation across boundary fences…”

Workshops have been conducted to address issues recognised at the planning meeting. These included a box gum woodland workshop, carbon farming workshop and soil and salt expo. Those who attended indicated they enjoyed the outings and gained valuable knowledge about their land in the context of the “landscape”.

The Locals Linking Landscapes project aims to achieve “landscape relevant” outcomes. This requires co-operation across boundary fences, with project design considering functional connectivity, riparian protection for whole reaches, and landscape processes such as the implications of groundwater recharge/discharge for salinity and erosion.

The second round of funding called on those who had already received funding to discuss extending their projects with neighbours. The resulting “clusters” of interest (see map 2), are an indication of the effectiveness of this approach and the commitment of the local community to having a positive influence on the landscape.

Congratulations and thank you to all who have been involved so far. If you would like further information or would like to become involved, please contact David Hilhorst, Southern Rivers CMA, Braidwood on 4842 2594.

Funding from Caring for our Country (Australian Government) and Catchment Action NSW (NSW Government) has been gratefully received for a second and third round of effort. Twenty-four people have already expressed an interest in receiving funds, so get in quick.

Please contact David Hilhorst:
Biodiversity Project Officer
Southern Rivers CMA
42 Ryrie Street, Braidwood
Telephone: 02 4842 2594
Native Vegetation and Salt

By Sky Kidd

At the Salt and Soil Expo held in Windellama on the 11th of September, there were many questions raised about plants and salt. What plants can grow in salty environments, what are the indicators, and, more importantly, what fodder plants can grow in a salty environment?

There are many factors as to why plants will grow in salty environment:

- they can withstand being seasonally waterlogged (Juncus species)
- they use salt (Old Man Salt bush)
- they tolerate salt (some Melaleucas)
- they can do a mixture of the above.

There is plenty of evidence to show that Old Man Saltbush (*Atriplex nummularia*) won’t grow in the Southern Tablelands. Too frosty, soils not suitable, too cold in general. And often soils have a pH of below 6, which they don’t like either. There is not any one suitable salt-using fodder shrub that is comparable for our district yet. If you are not convinced, then purchase some tubestock from [www.oldmansaltbush.com](http://www.oldmansaltbush.com) or [www.inlandbotanics.com.au](http://www.inlandbotanics.com.au) and try for yourself. Don’t forget to tell us all about it!

But it is not all doom and gloom. There certainly are trees and grasses that already grow in the area that are able to help you tip the balance in your favour. They may not use the salt, but they can handle the salt levels and tolerate waterlogged conditions, which means that you can work toward improving soil structure, increasing soil biology and providing diverse fodder for your stock. *Diversity is and will always be the key*, not just for salt but it will help in other ways too! And keep in mind when assessing a salt scald that the “lack of vegetative cover is quite likely to be the consequence of other unfavourable soil factors, including changes to pH such as extreme alkalinity (up to 11.2), increased bulk density and soil structure decline, soil organic matter decline and changes to soil microbial composition” (Bann & Field).

So by retaining, encouraging regeneration of and planting more of these species you will not only be assisting in the management of salinity, you will also be providing biodiversity conservation benefit by improving an Endangered Ecological Community (Box Gum woodland EEC - [http://www.environment.nsw.gov.au/resources/nature/box-gumIdGuidelines.pdf](http://www.environment.nsw.gov.au/resources/nature/box-gumIdGuidelines.pdf))

Such actions will also provide habitat to rare and threatened fauna that use habitat provided by this community.

References:

*Australian Agronomy Conference 2006* paper - Bann, Glen and Field, John. The use of native (endemic) grass and tree species for dryland salinity mitigation, remediation and agronomy activities in south-east Australia. Email: [glen.bann@anu.edu.au](mailto:glen.bann@anu.edu.au).

Table 1: Trees and grasses in our area that will grow include species that make up the box gum woodland vegetation community.

<table>
<thead>
<tr>
<th>Grass</th>
<th>Common name</th>
<th>Pasture potential</th>
<th>Comments*</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Bothriochloa macra</em></td>
<td>Red-leg grass</td>
<td>//</td>
<td>Drought tolerant, low nutrient soils. ‘Warm season’ growing, uncommon</td>
</tr>
<tr>
<td><em>Chloris truncata</em></td>
<td>Windmill grass</td>
<td>///</td>
<td>Hardy, warm season native pasture grass. Common on degraded sites and heavy soils. Salt tolerant.</td>
</tr>
<tr>
<td><em>Cynodon dactylon</em></td>
<td>Couch grass</td>
<td>///</td>
<td>Vigorous native? Very hardy, drought and salt tolerant. Warm season.</td>
</tr>
<tr>
<td><em>Austrodanthonia spp.</em></td>
<td>Wallaby grasses</td>
<td>///</td>
<td>Hardy, common and salt tolerant. Productive most of the year with high potential. A number of possible species.</td>
</tr>
<tr>
<td><em>Dichelachne micrantha</em></td>
<td>Short hair plume grass</td>
<td>/</td>
<td>‘Cool season’ grass, probably useful as pasture grass. Uncommon</td>
</tr>
<tr>
<td><em>Elymus scaber</em></td>
<td>Wheat grass</td>
<td>///</td>
<td>Drought and salt tolerant. Young growth very palatable but does not like heavy grazing. Cool season. Common.</td>
</tr>
<tr>
<td><em>Sporobolus creber</em></td>
<td>Slender rats-tail grass</td>
<td>/</td>
<td>Summer and autumn growing grass ('year long green'). Uncommon</td>
</tr>
<tr>
<td><em>Themeda australis (Syn T. triandra)</em></td>
<td>Kangaroo grass</td>
<td>/</td>
<td>Does not like heavy grazing. Warm season Young growth palatable. Very common</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tree</th>
<th>Common name</th>
<th>Regen?</th>
<th>Comments*</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>E. melliodora</em></td>
<td>Yellow Box</td>
<td>Y</td>
<td>Die back resistant, salt tolerant</td>
</tr>
<tr>
<td><em>E. blakelyi</em></td>
<td>Red Gum</td>
<td>Y</td>
<td>Salt tolerant, partial dieback susceptible but young are strong if regen is under yellow box</td>
</tr>
</tbody>
</table>

*Adapted from Bann & Field - Native grasses and trees identified growing at salinised sites on the Southern Tablelands of NSW
BULG forges new path at Flood Creek

By Donna Hazell

If you have driven along Bombay Road (towards the Tip) in the last six months you may have noticed some of the work undertaken by the Braidwood Urban Landcare Group (BULG). By combining funding from the Sydney Catchment Authority, Department of Lands, Upper Shoalhaven Landcare Council and Greater Southern Area Health the group has managed to construct a footpath along Flood Creek and a low level crossing across the creek. There are also sufficient funds to construct a bridge allowing wheelchair access across the creek to Garvey Street.

BULG Executive members Kate Park and Ben Gleeson looking happy to finally get to the 'hands on' part of the project (with project manager, young Joseph Millpark, cracking the whip from the comfort of his pram).

The path along Flood Creek has been designed to allow pedestrians, (including those with strollers,) bike riders and even folks in wheelchairs to gain access to Flood Creek and its surrounds. The low level crossing across Flood Creek is close to Archer's Bridge and provides a firm surface where people on horseback can cross the creek without wading through the soft sediment and disturbing the creek bed. During below-average flow this crossing also allows pedestrian access from Hassall's Reserve to Bombay Road. The project has involved an enormous amount of planning with BULG executive needing to get their head around engineering standards for path construction, appropriate culvert diameters and associated headwalls and estimating how many tonnes of road base would be required - a far cry from ordering tubestock... Many thanks must go to Palerang Council for providing the group with planning assistance in such unfamiliar territory. The project was made possible through an opportunity to apply for funds from Department of Lands to do work on Crown Land.
There are actually three creeks which flow through Braidwood. BULG completed a management plan for Braidwood's creeks in 2002. In developing the plan the broader community provided considerable input, particularly via a public 'Ideas Day' on creek management held by BULG.

The project site near Archer's bridge ready for native plantings and construction of the low level creek crossing. This shot was taken just after large dead willows were removed with privet, hemlock and ivy mulched back to ground level.

One of the ideas put forward by the community through this process was a creek walk connecting various parts of the town. It's nice to see one of these ideas come to fruition! The bridge over Flood Creek linking the western end of the footpath with the bottom of Garvey Street (near the golf course) is yet to be constructed with some final approvals still to be obtained.

Palerang Council has provided staff time in designing the bridge and will oversee its construction. In lieu of a bridge a makeshift crossing is already in use for those prepared to risk getting their feet wet. Further plantings will occur for several seasons with a view to creating a corridor of green on both sides of the path. With the development of the community garden at the western end of the footpath, and completion of the bridge to Garvey Street, it is hoped that the path will become a valued asset of the town, enjoyed by locals and Braidwood visitors alike. Many thanks to those within the community who have answered the call for volunteers to assist with working bees and planting days to make this project a success. BULG is a small group and relies strongly on this extra support when it comes to the on-ground action – thanks to you all!

Chair: Donna Hazell
Secretary: Ben Gleeson 4842 2679
Treasurer: Kate Park

New members are always welcome. Contact the secretary for information about the next meeting.
Local Landcarer

Gets World Class Compost Tea Training

By Ian Moy

On the 29 September to 1 October I attended the Bio fertile Course for farmers at Milkwood Permaculture in Mudgee.

The course was set up for farmers to learn how to go to the shed instead of the shop to source the fertiliser requirements for their farms. We learnt to make fertilisers using ingredients and equipment that are relatively cheap to purchase or from materials that can be found on most farms, such as bones and wood ash.

The research for this over the last 10 -15 years has come from a team of committed chemists, farmers and educators in Latin America called COAS and has been promoted in Australia by Regen Ag Australia [http://www.regenag.com](http://www.regenag.com). This year COAS have held courses on Yeoman’s Keyline techniques with Darren Dougherty as the instructor. Darren is Australia’s, and possibly the world’s, leader on Keyline principles.

Kirk Gadzia from New Mexico offered innovative and up to date Holistic grazing and financial management techniques. Kirk is a Holistic Manager trained by Allan Savory and has farmers and institutions across the world with whom he consults.

Bio Fertile Farms, with Paul Taylor and Eugenio Gras as the instructors, taught farmers how to make Bio fertilisers and compost teas on their own farms. The fertilisers were “Phosphito” a natural version of phosphate, Lime sulphur solution, and Bio fertiliser, an anaerobic fermented fertiliser brewed with minerals such as basalt dust, rock phosphate, wood ash, dolomite, in fact any mineral that may be lacking in the soils on your farm.

These fertilisers are available in a water soluble format useful for foliar application. The appropriate compost and compost teas can be used to re enliven compacted anaerobic soils.

These soils are typical where use of conventional fertilisers such as super phosphates and all the herbicides, pesticides, fungicides etc have degraded soil health so much that the only plants that flourish are classified as weeds, and the common response is to keep spraying which puts the soil ecosystem back into regression.
By understanding plant succession and concentrating on improving soil health you can create a healthy, mineral rich nutritional environment for higher order plants.

The most important message and theme that has been has consistently presented by all instructors is to learn to understand the importance of healthy living soils and how that will produce healthy productive plants and pastures that will in turn produce healthy animals.

Soils that contain a healthy living ecosystem will hold up to 140,000 litres of water per hectare and by default high amounts of carbon will also be stored in these soils.

It is very important to aim at having permanent ground cover and green growth happening all year round so that through the process of photosynthesis the relationship between the plants root system and the microorganisms will result in providing the nutrition that the plant requires and sugars and saps that the microorganisms feed on. When this is in balance soil moisture and carbon will be at its peak.

The benefit to farmers of this approach is that by working together to make these fertilisers they can get their properties healthy and reduce debt by no longer relying on the chemical drugs that ultimately destroy soil and plant health.

Now farmers can produce healthy food without the cost of expensive inputs and sell their produce for comparative prices with a much larger margin of profit.

Just think when farmers in our rural communities get out of debt and start to make good money and are happy and proud of the nutritional quality of their produce, how that may then attract younger farmers back into and rebuild community.

The next course on the regen ag agenda is a talk with Joel Salatin, one of Americas most controversial farmers who is a guru of marketing, value adding your farm produce and direct marketing yourself. Joel has been farming all his life and now their farm Polyface Inc generates over US $2,000,000 and it’s not a huge farm - its less than 1000 acres.

Joel will be at Mulloon Creek on the 25 & 26 November and at Mudgee on the 10 & 11 December.

For more information on this or bookings for courses contact Milkwood Permaculture [http://www.milkwoodpermaculture.com.au/] or Ian Moy kalyarni@gmail.com
**Book Review: Monitoring Biology in the Soil.**

The USUD has recently purchased for their library a copy of the paper titled ‘Qualitative Assessment of Microorganisms found in Soil, Compost, Castings and Compost Teas’ by Dr Elaine Ingham and Dr Carole Ann Rollins. One of the difficulties in soil management (and indeed pasture, water and animal management!) is being able to tell whether or not the whiz-bang new product you made or bought actually does what it says on the box. If we are going to advocate do it yourself biological farming, or even buying the freeze dried biology to add to the soil - then we really need to learn all about the Soil Food Web and how to tell if our compost teas and worm ju ju’s are giving us bang for our buck. Soil samples can be biologically analysed at the Soil Food Web International lab in Lismore, Northern NSW. While professional analysis by the experts is advised at the beginning of your endeavours - and at some point later - it is not the only way to measure and monitor, and it is too expensive and impractical to send living organisms up to Lismore every time you make a compost tea. This Manual will help people make basic determinations about the biological activity of their soil or the innoculants they are putting in it. The manual describes how to recognise good and bad bacteria, fungi, ciliates, nematodes and more, and offers advice on interpreting what you see. If you see about 200 bacteria in a drop of whatever it is - and they all look alike - then you have low numbers and low diversity. If you see various shapes and sizes of bacteria and some are clumping, you have higher diversity and higher numbers. Drs Ingam and Rollins explain why this is good - just as they explain how to identify a Ciliate and what it can tell you about the quality of your compost tea or worm juice or any other brew you have made. The manual offers detailed specifications on the recommended microscopes one would need to purchase, but not with current $AUD prices.

**What’s on in Landcare?**

- Col Seis at Mulloon Creek Monday November 8th
- Upper Shoalhaven And Upper Deua Landcare AGM in Windellama Wed 10th November
- Paddock Plants Field Day - Friday 12th November in Braidwood - Call Dept. Industry & Investment 4828 6646
- Peter Andrews and Martin Royds are in Braidwood Sunday 14th November
- Landcare XMAS Party is on in Braidwood Friday the 10th of December
- Threatened Species Presentation TBA

42 Ryrle St (PO Box 9) BRAIDWOOD NSW 2622