

Permaculture Cairns Inc. Established July, 2007

Web site: [www.permaculturecairns.org.au](http://www.permaculturecairns.org.au)

# Permaculture Cairns News

**Empowering communities with sustainable solutions**

**Care for the Earth, Care for people, Share the excess**



*Care of the Earth, Care of*

*People. Share the excess*

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## **MARCH Public Info Meeting**

**Tuesday 18<sup>th</sup> 6:30pm for 7pm start.**

**Flexible Learning Centre, 90 Clarke Street, Manunda**

**Clarke Street comes off Hoare on the Salvos Corner.**

**Members please bring a plate of salad to share, and a friend.**

## **The theme for the meeting will be**

**Principle - 3 Obtain a yield**

**We will have demonstrations and talks about how to obtain a yield. Sarah will talk about the process of fermentation and make a short presentation. Everyone is encourage to join in.**

if you would like to know more about David Holgrom's Principles and Practices of Permaculture see them at <http://permacultureprinciples.com>

## **Last meetings Community Engagement**

The community engagement went well, we had many and varied discussion on a range of topics including solar – save and store energy. The survey completed by members on the night indicated the most wanted workshops, which will be incorporated into a grant application. New members were welcomed. Jude Perry gave us a short run down on what is available at Enviromart Australia, our environmentally focused store in Aumuller Street.

Permaculture Cairns encourages members to support locally owner operated businesses.

**Message from the Committee:** Permaculture Cairns members have the opportunity to access the Permaculture yahoo group when they join. Robert, the Administrator will email you to determine if you are agreeable to receive emails from the permaculture cairns yahoo group. The group has a forum for questions and info. Late news items not received in time for the Newsletter will also be sent through the yahoo group email. These news update are only available to members.

## **NEWS ITEMS**

Queensland's Newman government will axe the state's 8c/kWh rooftop solar feed-in tariff at the end of June, leaving solar households with the challenge of negotiating a tariff with their electricity retailer.

The move by the government – which will affect 40,000 households, and any new rooftop solar adopters – was expected, and was justified by claims it would “lift the cost burden” from electricity network businesses and put “downward pressure” on electricity prices for all Queenslanders.

Queensland energy minister Mark McArdle said in a media release on Thursday that the carbon tax and renewable energy targets had driven electricity prices “much higher than they should be.” No mention of the soaring cost of the government-owned networks.

“Left unchecked, the 8 cent feed-in tariff would cost Queensland households and businesses an extra \$110 million on their power bills over the next six years,” McArdle said. Presumably, he was expecting the number of Queensland households to increase dramatically, because the current 40,000 households on the 8c/kWh tariff would need to export nearly all their generation to meet that figure.

Critics say the changes – announced as part of a series of reforms to the state's Solar Bonus Scheme – mean that the 40,000 solar households in Queensland will be left at the mercy of the state's electricity retailers, who will assume responsibility for setting and offering solar energy tariffs.

“This is incredibly unfair,” said Lindsay Soutar, from Solar Citizens. “It is obvious that it will be difficult for individual households to get a good deal from their power company. They simply don't have the negotiating power. When retailers set the rules, solar owners lose.”

As one solar industry expert pointed out, the Queensland government was unable to win its fight with retailers over pricing, so what chance would an individual household have? Victoria, WA, and South Australia all have mandated minimum tariffs. NSW is the only state that doesn't, and even IPART found that customers were not getting a good deal – most well below the recommended rate. Many households are offered nothing.

Rhys Clay from Local Energy Solar [said](#) that while he disagreed with the Newman government's approach to limiting the solar feed-in tariff, the changes would at least help encourage customers to install energy storage, and save their surplus solar energy for use later in the night.

“It is our hope that the QLD government reforms electricity pricing to accurately reflect the true cost of electricity (higher prices at peak times) as this will help facilitate a shift energy efficiency and storage which in turn will benefit the network,” Clay said.

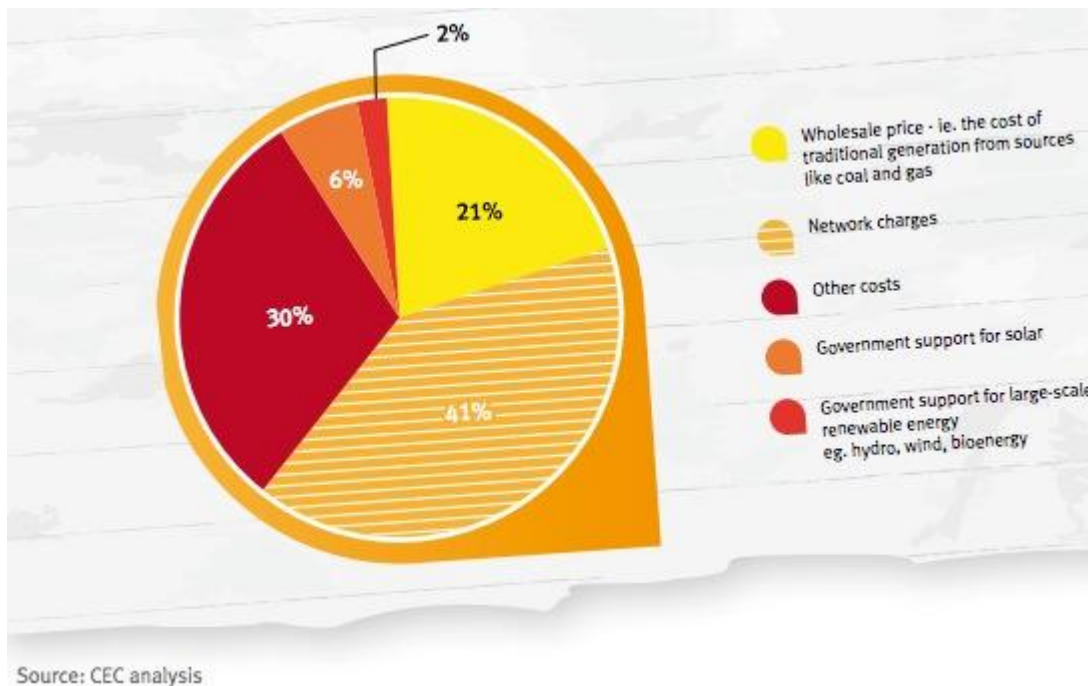
The Queensland government said customers of Energex would no longer have a government regulated rate, but will be able to negotiate a tariff with their retailer. Ergon Energy customers, meanwhile, will continue to be paid a tariff set by the Queensland Competition Authority until “there is enough retail competition in regional areas to make solar more self-sufficient.”

“These reforms will mean electricity retailers will pay any newly negotiated solar tariff direct to users,” McArdle said. “These are common-sense decisions that will produce a positive outcome for existing customers on the 8 cent rate, as well as new solar owners.”

This latest solar tariff cut follows the slashing of the 44c/kWh net tariff in 2012, when Campbell Newman's decision to provide a month-long window to take advantage of the 44c rate [inadvertently sparked a massive rush for rooftop solar](#) in Queensland.

Today, McArdle said the 44c/kWh solar feed-in tariff would be kept in place for the around 284,000 Queensland households who signed up to it before it was closed.

The solar industry has argued that government support for rooftop solar adds a negligible amount to the average household electricity bill, with more than two-thirds of price rises [caused by factors completely unrelated to any green schemes](#), such as soaring generation costs, network costs, and increased costs from retailers and billing centres.



#### Price breakdown of average Australian household electricity bill

Last year, a Queensland Competition Authority report recommended a 13.5 per cent increase in solar tariffs from July 1, 2014, and predicted that the impact of the carbon price, even if not repealed, would actually go down, as would any impact from renewable energy schemes.

In an interview with the *Courier Mail*, [McArdle said](#) axing the 8c FiT in the state's southeast would foster competition ahead of the removal of regulated prices in July 2015.

"I don't think (retailers) will abandon solar customers, because paying the feed-in tariff is part of their market strategy to attract customers to their contracts," he said.

"Customers can then start to play retailers off against each other to get a better deal, and we may well find that the feed-in tariff increases with competition."

But all is not lost, read on

## **SOLAR Battery solutions are on the way**

Battery solutions that can rival electricity retail prices are arriving in the Australian market, with the potential to further disrupt incumbent utilities' business models. SolarQuip's Glen Morris said that batteries with "optimised equipment" can store electricity in homes for between \$0.23/kWh to \$0.28/kWh. Morris is currently working with solar distributor Solar360 on rolling out a series of storage products and power electronics for storage solutions. Morris said that the time has arrived where battery storage can compete with retailers, under certain models. Morris' is currently running a three-day training program for the Australian Solar Council at Swinburne University.

"If you can store energy that cheaply, it suddenly makes it viable to put in a battery system in because it saves you money."

Solar360 is introducing a number of technologies to make cost competitive storage available to its installers. These include a storage-ready inverter from Chinese supplier SolaX, two sizes of inverterchargers from Schneider Electric and two lithium-ion batteries from BYD.

"About a year ago I was quoting \$1/kWh with storing electricity with a lead-acid battery," said SolarQuip's Morris. He described the pricing of the new solutions as being a "game changer". Morris explained a number of scenarios where these storage solutions can be cost-effective for households.

Morris, who is also the vice president of the Australian Solar Council, said that adding solar to battery systems makes the proposition even better. "You'd then be getting electricity for the low \$0.30s/kWh, when you'd be paying the peak rate."

Naturally, this scenario doesn't apply right around Australia, and time-of-day pricing is currently not being offered to all households. In fact, some utilities are reported to be taking steps to actively discourage distributed storage.

In South Australia, the current generous FIT for PV is cancelled if a battery is added to a solar installation and on the Horizon Power grids outside of the SWIS in WA, technical requirements in some areas may make adding storage problematic. On top of that, utilities may take steps to discourage storage by increasing fixed charges to bills or by applying grid costs even if a residence goes off grid.

"Retailers are now in direct competition with their customers," said Morris. "The utilities will be pushing hard at all levels, technical, regulatory and political – so it's going to be a real battle."

Despite these potential hurdles, some remain bullish as to the cost reduction path that battery manufacturers are on.

Former Sustainable Energy Association CEO Ray Wills said that battery technology, such as lead acid and lithium-ion, are mature technologies and that for lithium-ion, increases in production for industries such as e-mobility and consumer electronics driving major increases in production volumes.

"We've seen a 600% increase in production of solar panels over the last five years and the consequence was that solar panels came down in price more than 80% over the course of several years," said Wills, "and we'll see that sort of development with batteries as well."

This will impact on battery payback periods, potentially leading to a boom in installations. "What we know at the moment is that batteries installed in the home have a payback of round and about nine to ten years, so when we see batteries drop behind a five-year repayment, we're going to see a very rapid uptake." Wills' prediction is for batteries for family homes to reach that point some time in 2015.

## **CSIRO - NEWS RELEASE**

### **Spotlight > State of the Climate 2014**

Every two years CSIRO and the Bureau of Meteorology get together, crunch the numbers and release a definitive report on long term trends in Australia's climate - The State of the Climate.

The SoC 2014 released today is focused on the changes that have been observed in Australia's long-term climate trends and it shows that temperatures across Australia were, on average, almost 1°C warmer than they were a century ago, with most of the warming having occurred since 1950.

"Australia's mean temperature has warmed by 0.9°C since 1910," BoM chief Dr Vertessy said. "Seven of the ten warmest years on record in Australia have occurred since 1998. When we compare the past 15 years to the period 1951 to 1980, we find that the frequency of very warm months has increased five-fold and the frequency of very cool months has decreased by around a third.

"The duration, frequency and intensity of heat waves have increased across large parts of Australia since 1950. Extreme fire weather risk has increased, and the fire season has lengthened across large parts of Australia since the 1970s.

"We have also seen a general trend of declining autumn and winter rainfall, particularly in southwestern and southeastern Australia, while heavy rainfall events are projected to increase. Australian average annual rainfall has increased slightly, largely due to increases in spring and summer rainfall, most markedly in northwestern Australia."

### **Health Check:**

### **why kids don't like vegies and how to change it**

Posted: March 5, 2014 | Author: [Steph Overton](#) | Filed under: [Feature Articles](#), [Health and Wellbeing](#) | Tags: [behaviour](#), [food](#), [neophobia](#), [toxin](#), [vegetable](#) | [Leave a comment](#)

By [David Cox](#), *Group Leader, Sensory and Behavioural Sciences*

So little Harry won't eat his vegetables? Well, he's not alone. Poor Harry is just protecting himself from the danger of alkaloid toxins - although he doesn't actually know this.

At the tender age of four, Harry is neophobic (fearful of new things) and facing "the omnivore's dilemma". The dilemma is that humans need to eat a variety of foods to grow healthy and strong but there are lots of foods out there that our sense of taste tells us might be poisonous. There are good reasons for this because some bitter plants, for instance, contain alkaloid toxins. But some bitter components of foods, particularly in vegetables, are good for us.

So avoidance of bitterness is innate because it's associated with toxins - and it results in children rejecting vegetables.

### Widening Harry's palate

Children only have an innate preference for sweet foods because of their association with dietary energy, and only learn to like salt early in life (at about four months of age).

But they need to learn to like bitter and sour foods too. In Brassica vegetables such as broccoli, cauliflower and kale, for instance, compounds such as glucosinolates and phenolics that contribute to the tastes bitterness and sourness are the same as those that **contribute to their “healthy characteristics** - the inhibition of carcinogenesis.

Luckily, for Harry, he has his family around him. Mum is a trusted source of information about what's right and what's wrong, and the gatekeeper of the food supply. The trouble, of course, is that mum can't face another temper tantrum over a Brussels sprout. So what to do?

### Reaping rewards

Researchers in **Australia, including me**, and **the United Kingdom** have found ways of getting Harry to eat his vegetables.

The study I was involved in included a group of four- to six-year-old neophobic children. We found exposing kids to vegetables about eight or nine times over two weeks and offering them a non-food reward for tasting them resulted in a significant increase in liking vegetables, compared to just exposing them to the food. For example, every time a child tasted a vegetable, she got a sticker to put on a chart. This kind of reward provides positive reinforcement, and the display and self-monitoring of achievement. All this is stuff is known to reinforce behaviours



The frustration of a young man trying to protect himself from alkaloid toxins and suchlike. Image: **sean dreilinger/Flickr, CC BY-NC-SA**. The UK research echoed and supported these findings.

### Models of behaviour

Parental role modelling is important too and more work is needed to provide parents with the skills to deal with refusals. This includes improving parents' belief in their ability to prevail in certain situations. This belief **plays a major role** in how people approach goals and tasks. But does it even matter? Won't Harry just grow out of it?

It's true that, at four years of age, Harry has hit his neophobic peak and things might get better through gradual exposure and learning what's safe.

Things will also change as eating vegetables becomes associated with pleasant outcomes, such as having a nice meal with friends and family. The conviviality associated with the consumption of a formal meal is thought to unconsciously increase the liking for the foods eaten.

But it's tough because there aren't too many immediate benefits from eating vegetables and it's a waste of time telling him they're healthy.

We know that **taste perception rather than health information** has the biggest influence on **liking brassica vegetables** among adults. So learning to like his vegetables early on is important because it's going to influence what Harry eats for the rest of his life.

### The importance of persistence

Loving eating vegetables at an early age could set Harry up for a life of low energy dense, high micronutrient rich diets that are going to help his weight and may protect him against chronic diseases.

So don't give up. Exposure to a wide range of tastes in a pleasant eating environment, and watching his mum and dad eat vegetables will all help.

And when Harry's younger sibling is still in the womb, it will probably help a lot if mum eats her vegetables because **research shows** flavours travel through the amniotic fluid to the growing foetus and influence food acceptance soon after birth.

So investing in their own healthy eating helps mothers save dinner table battles months or years later. Fathers, who are likely to be worse at protecting their health, should also take heed and become the right kind of role model for their children by eating vegetables too.

This article was originally published on **The Conversation**.

## **Health Check: is it safe to cut mould off food?**

The short answer is that it's a lot safer than not cutting it off. Some moulds make and release poisons, called mycotoxins, into the food that could, over time, make you very sick. Why they do it is not especially well understood but that doesn't make it any safer.

Some mouldy foods should simply be discarded (ideally, to compost). For others, though, you can salvage and use the unaffected parts without exposing yourself to a health risk. That's good if your mouldy food is an expensive, vintage cheddar cheese!

## The life of moulds

Moulds are fungi. They're related to mushrooms, and the yeasts we use to make bread, or convert sugars to alcohol. They are heterotrophs, meaning they can't make their own food (unlike plants). Instead, they degrade complex organic molecules in their environment into smaller molecules they can absorb to meet their energy and nutrient needs.

In nature, mould's ability to break down detritus (waste) ensures that dead matter doesn't accumulate. It also enables the release of minerals that are chemically tied up in detritus to the plants that need them for their primary production.

Moulds are single-celled organisms and, individually, are microscopic. When water and nutrients are available (such as in semi-perishable foods) they grow in number: to procreate, mould cells simply make copies of all essential cell components, and then divide into two new (genetically identical) "daughter" cells.

When moulds divide the two cells stay connected and when they divide again and again, they form a long chain of cells, called a hypha. The hyphae can branch and collectively form a complex matrix called a mycelium that, when big enough, can be seen with an unaided eye. This is the furry growth we can see, for example, on crumpets, berries, jam, tomato paste, cheese, and so on.



Not all moulds on foods will produce mycotoxins, or produce them at harmful levels. Image: Sleepy Gonzales

The growing tips of the hyphae release enzymes into the environment to degrade complex organic molecules into usable nutrients. The tips of the hyphae also release the mycotoxins which are probably released to ward off competitors.

So, wherever the mycelia go in search of nutrients, toxins may also be found. The extent of spread of the mycelium is not always visible, however, and herein lies the problem.

## What to do?

Many moulds can grow on, and spoil, our foods. Among those we are likely to encounter on foods in our homes are *Penicillium* (“cousins” of those used to make antibiotics, or to ripen some cheeses), *Aspergillus*, and on fruits, *Botrytis*.

You’re unlikely to experience any immediate symptoms from ingestion of mycotoxin-contaminated foods. Ongoing exposure increases the chances of a range of diseases including kidney, liver and immune system damage, increased risk of a range of **cancers** and neurological symptoms; though these worst-case scenarios are rare.

Not all moulds on foods will produce mycotoxins, or produce them at harmful levels, but without a microscope and laboratory it’s hard to distinguish the dangerous and harmless ones. Given the risk to your health it’s best to take a very cautious approach to visible mould growth on any food with some exceptions.

A good rule of thumb to judge whether a mouldy food can be “saved” is its moisture content or firmness. Foods with a high moisture content such as cooked casseroles, soft fruit and vegetables, pastes/sauces and soft cheeses can have invisible hyphae growing below the surface and producing mycotoxins.



Time for composting. Image: Jo Naylor

The same is true for porous foods such as bread and cakes where the hyphae can penetrate. All of these foods should be discarded if you see mould on the surface.

Conversely a cheddar, or a salami, or carrot, that have dense structure are less likely to have extensive hyphal growth away from the visible mycelium. In these cases the mycelium **can be cut away** (to a centimetre or two depth) and the remaining food consumed with little risk.

The United States’ Department of Agriculture’s [website](#) is a good source of advice for dealing with mould contamination on a wide variety of foods.

## The noisy future of farming

Erik Assadourian

**How will we sustain protein levels in our future food supply, in a world where 9 billion-plus people will be pushing the planet's farming and aquaculture systems to the limit? Grain prices will almost certainly go up and so will the price of meat, as livestock depend on these grain supplies. Insects, though, offer a good alternative – healthy, easy to raise, and much more efficient in processing vegetable matter into animal protein.**



Deep-fried insect food stall in Bangkok, Thailand. Counter-clockwise, from the back-left to the front: locusts, bamboo-worms, moth chrysalis, crickets, scorpions, diving beetles and giant water beetles.

Credit: Wikimedia Commons/[Takoradee](#)

The United Nations released [a report](#) last year advocating an accelerated shift to insect consumption in the west. The report claimed that [crickets use one-twelfth the feed required by cattle to produce an equal amount of protein](#).

Attending [a Dutch-hosted, bug-eating, embassy reception](#) last year, I was interested to watch people's reactions to the cuisine – the cricket guacamole, the cicadas and asparagus on a stick, the mealworm pancakes. As most guests realised, bugs don't taste like much when integrated into a complex recipe.

The easiest way to integrate insects into the western diet will be through processed foods where the distinct crunch and taste of bugs is lost and just the healthful and sustainable source of protein is preserved.

This approach has already moved forward to some degree in the Netherlands – at specialty grocery stores, shoppers can buy freeze-dried bug patties. At the embassy event there were even samples of [Chapul](#), a new energy bar for sale in the US that has cricket bits in it.

All of this imagines a factory-farmed bug future where agribusiness grows and sells insect protein at a large scale to fill the processed foods that now mostly have ground-up chicken, pig and beef bits in them.

Certainly an improvement, ecologically speaking, but considering how unhealthy most processed foods are – filled with salt, sugar, preservatives and artificial flavours and served in unsustainable and often toxic packaging – maybe not so large a step forward as we could take.

During the embassy event there was long discussion of a future of factory-farmed bugs – which one expert assured the audience was just fine, as insects like crowded conditions and their diseases don't easily migrate to humans like the diseases that affect current livestock do.

But can't we do better? Massive amounts of waste will still be created – will it pour down rivers like chicken, pig, and cow manure currently does?

In colonies of millions of bugs, conditions will be ripe to spread new insect diseases, which may, in turn, mean continuing reliance on huge amounts of antibiotics or fungicides for our new 'livestock' (even if there's no risk of these diseases spreading to humans). And perhaps worst of all, the industrial model, with its concentration of profits, will continue.

The most exciting moment for me at this event came when the expert mentioned in passing that 20,000 households in Thailand [make part of their living from raising crickets or other bugs](#).

Now *this* is the future I'd like to see. Everyone can raise a fish tank full of crickets using their own food scraps and rotting plant matter, and probably generate a free pound of animal protein every month or so – just enough for a minimum dietary intake, with the added benefit of lower overall household costs (while having a positive ecological effect as factory-farmed meat is displaced by [freegan](#) crickets).

This idea raises some intriguing questions: How does one go about raising a small quantity of crickets for personal consumption? What are the hours of work time needed to sustain your flock? The inputs? Will food scraps and foraged bits of yard waste from your and neighbours' yards or local parks be enough or, like larger-scale cricket farmers, would one need to buy chicken feed (which would change the financial equation dramatically)?

With current meat prices, small-scale production of crickets probably can't pay for itself right now (not if time costs are factored in and environmental externalities aren't), but once food is no longer easily or cheaply purchased at the local supermarket, insect farmers may be some of the best equipped to survive food shortages.

That's food for thought, even if you have to catch it first.

- See more at: <http://www.ecosmagazine.com/?paper=EC14034#sthash.UFAltJ79.dpuf>

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## **Fungimap is Australia's Fungi Bank**

Fungimap Inc is a non-profit citizen-science organisation dedicated to raising the profile of Australia's incredible fungal diversity. Our emphasis is on enjoying and learning about fungi and our focus is on macro-fungi in the natural environment. Our mottos are 'Putting Australian fungi on the map' and 'Community based science in action'.

Fungimap maintains the National Australian Fungimap Database (NAFD) containing over 100,000 records and 6,500 images of fungi from over 700 contributors nationwide. This valuable resource is used for research, conservation, and policy purposes and has been provided to the Australian National Heritage Assessment Tool (ANHAT), state and Commonwealth environment agencies, and the [Atlas of Living Australia](#).

The Fungimap website at [www.fungimap.org.au](http://www.fungimap.org.au) is a wonderful source of information. You can get involved by becoming a member of the organisation, learn to identify and forage for fungi in your local area and add to a growing database of records. Check out Fungimaps wonderful bookshop and receive their newsletter and receive discounts to their wonderful events including the QLD FUNGI FESTIVAL on 22 -27 March 2014.

(If you are interested in growing fungi to eat check out [www.fungi.com.au](http://www.fungi.com.au))

## **Media releases from our Government**

TITLE: Northern Australia White Paper Underway

PORTFOLIO: Infrastructure and Regional Development

URL: [http://www.minister.infrastructure.gov.au/wt/releases/2014/february/wt024\\_2014.aspx](http://www.minister.infrastructure.gov.au/wt/releases/2014/february/wt024_2014.aspx)

SNIPPET: The Premiers of Queensland and Western Australia and the Chief Minister of the Northern Territory have agreed to join a new Strategic Partnership to inform the development and implementation of Australia's first Northern Australia White Paper. The Government will produce a White Paper on Developing Northern Australia within 12 months. A new Northern Australia Strategic Partnership comprising the Prime Minister and the Premiers of Queensland and Western Australia and the Chief Minister of the Northern Territory will be established.

TITLE: Government Acts to Deliver Australia's Biggest Infrastructure Agenda

PORTFOLIO: Infrastructure and Regional Development

URL: [http://www.minister.infrastructure.gov.au/wt/releases/2014/february/wt023\\_2014.aspx](http://www.minister.infrastructure.gov.au/wt/releases/2014/february/wt023_2014.aspx)

SNIPPET: The Government's \$35.5 billion commitment to delivering the infrastructure that Australia needs to meet the challenges and opportunities of the 21st Century took another step forward in Federal Parliament yesterday. Deputy Prime Minister and Minister for Infrastructure and Regional Development Warren Truss introduced the Land Transport Infrastructure Amendment Bill, which maps out the Government's infrastructure priorities, while repealing and amending Labor's legacy of failed policies. Major projects under the Infrastructure Investment Programme include:-

I checked it out and first on the list was **\$6.7 billion** for the upgrade of the Bruce Highway!!!!

## **DATE CLAIMERS**

### **COMMUNITY FILM NIGHTS**

The films are done and so our community film nights are on! We are so excited!

#### **RegenAG® MasHumus Farm Study Tour of Latin America**

Join us for an inspiring night of short films that document our recent RegenAG® study tour that saw 17 Aussie farmers travel to 12 farms across Mexico, Costa Rica and Ecuador to learn how Latin farmers are beating the odds against rising input costs, water charges and declining soil health. The films showcase the why, what and how of their innovative methods and their transition from bankruptcy to record financial and environmental health on a range of commercial scales. The nights will include time for discussion and networking with some of the farmers whom went on the tour.

Please get along to one of these nights, see details on the flyer below or visit our website at [www.RegenAG.com](http://www.RegenAG.com)

6.30 PM – 9 PM

ENTRY - GOLD COIN DONATION

DIMBULAH COMMUNITY CENTRE - 21<sup>ST</sup> MARCH

ATHERTON MERRILAND HALL – 22<sup>nd</sup> MARCH

INNISFAIL SHIRE HALL – 28<sup>TH</sup> MARCH

KURANDA TRADING POST – 29<sup>TH</sup> MARCH

MAREEBA RSL – 1<sup>ST</sup> APRIL

CAIRNS JCU CAMPUS – 4<sup>TH</sup> APRIL – The Cairns Institute Lecture Theatre D3:054

MOSSMAN SHIRE HALL – 5<sup>th</sup> APRIL

### **Tablelands LETS March Calendar**

#### **Relocalising all of Far North Queensland**

**Saturday 15<sup>th</sup>, 11am -2pm Digger Street Cairns LETS Trade day!!! Entrance is 346 Sheridan Street, Cairns.** Come to trade, bring a plate& relax in the beautiful tropical community gardens. Massage and Healing Bodywork for Bartles available. Tablelands traders welcome!

**Contact Louise for more info 041 428 5873.**

**Saturday 15<sup>th</sup>, 10am start. Card Making / Scrapbooking Workshop at Gloria's at 29 Wattle St, Walkamin. 15B + \$5 per session. Call Gloria on 0437 645892.**

**Saturday 15<sup>th</sup> from 2pm LETS in Business Sharing day -at *that Retro café* in Yungaburra, Shop 2/20 Eacham Rd. Cafe drinks available for 50% Bartles. Contact Natasha Hogan for more info 0432 984 977.**

**Sunday 16<sup>th</sup>, 12-3pm Herberton Lunch and Trade Afternoon at Leeandra's place, 28 Perkins Street. Please bring lunch to share. Children are welcome! Contact [leeandranorman@gmail.com](mailto:leeandranorman@gmail.com) or 048861175.**

**Sunday 16<sup>th</sup>, 11am-3pm Cassowary Coast Trade & Social Gathering at the Johnstone River Community Gardens, Flying Fish Point Rd, Innisfail. Bring a plate to share, something to cook on the BBQ if you wish, your own plate and eating utensils. Tea/Coffee by gold coin donation. Lunch will be at 12 noon. Trade starts 1pm. A child-friendly venue. Contact Suari on 040 311 5261. Carpooling/collection service encouraged from the Tablelands and Cairns!**

**Monday 17<sup>th</sup>, 8am start Real Food Working Bee @ Petals-The Old Rose Farm in Tolga, 7403 Kennedy Highway. Heavy duty work: cementing in metal posts for future cover, concrete flooring. Urgently needed improvements for Petals to enable the growing Real Food activities on the Tablelands. Pay is 15B/hour with shared lunch. Contact Irene on 0439 914 876 or Sjoerd Real Food on 0488 552 671.**

**Tuesday 18<sup>th</sup>, 6.30pm LETS Trading is encouraged at Permaculture Cairns meetings at the Flexible Learning Centre, 90 Clarke Street, Manunda. Cost for non-members to attend is \$5 for info session, supper and film etc. This is a Permaculture Cairns Event.**

**Saturday 22<sup>nd</sup>, 12-2pm -Yungaburra Trade at *that retro cafe*, Shop 2/20 Eacham Rd (next to Miss Megs/My Habitat). Drinks available for 100% Bartles. Children most welcome. This event is **directly after the Yungaburra Markets**. Contact Melitta on 0437216122.**

**Sunday 23<sup>rd</sup>, 11am-1pm Millaa Millaa Trade & Sausage Sizzle at Lion's Park, Main Street (undercover area, below playground). Bring a shared plate, something for the BBQ and drinks, Children & friends most welcome. Contact [kate.martignier@gmail.com](mailto:kate.martignier@gmail.com) or 0429 925 246.**

**Thursday 27<sup>th</sup>, 10am start Card Making / Scrapbooking Workshop at Gloria's, 29 Wattle St, Walkamin, 15B + \$5 per session. Call Gloria for more info 0437 645892.**

**Thursday 27<sup>th</sup>, 6 -8pm Trade Evening at The Octupi Garden Sanctuary, 78 Grigg Street, Ravenshoe (the lil blue shop). Please bring a plate. [hayleybuchanan8@hotmail.com](mailto:hayleybuchanan8@hotmail.com). Ph.0416528177**

**Saturday 29<sup>th</sup>, 10am start Card Making / Scrapbooking Workshop at Gloria's 29 Wattle St, Walkamin, 15B + \$5 per session. Call Gloria for more info 0437 645892.**

**Saturday 29<sup>th</sup>, 6 -9pm Malanda Trade Night at Katrin's Place, 33 Park Avenue, opposite the Caravan Park near Malanda Falls. Bring a shared plate, goods & skills to trade, busk for Bartles or just come for a chat! Family-friendly event. Contact Katrin 40966755.**

**Sunday 30<sup>th</sup>, 4-7pm Real Foods Trade afternoon at PETALS The Old Rose Farm in Tolga, 7403 Kennedy Highway. Bring along goods to trade and a healthful plate to share. Contact Sjoerd for further info on 0457 129 516.**

**What to bring to Trade Events where not specified above:** food & drinks for yourself or to share, or money and/or Bartles at some venues, friends, Trading Record Sheet and pen, any goods you wish to trade, table/rug to display them upon is often useful, your own chair at some venues, promotional material of any services you are offering if applicable, \$20 to join LETS if you are not yet a member.

[tablelandlets@gmail.com](mailto:tablelandlets@gmail.com) [www.communityexchange.net.au](http://www.communityexchange.net.au)

## **Seed Savers up north**

KURANDA - Sunday 16<sup>th</sup> March - 10am to 4pm

At Kuranda District State College

YUNGABURRA – Saturday 5<sup>th</sup> April

Brad and Coco's 10 Poinsettia Close, Lakeside 40952814

MAREEBA – Sunday 13<sup>TH</sup> April 10am to 4pm

At Noelle and Pieter Saraber's – 207 De Lacy Road, Dimbulah,  
carpooling from Lindy and Michaels, 17 Middlemass Street, Mareeba  
at 9am 40921116

CAIRNS – Sunday 27<sup>th</sup> April at Jo's 39a Clifton Road,  
Clifton Beach, 40553053

COOKTOWN – Saturday – first of each month – David Cass  
0439348425

JOHNSTON RIVER – Call Suari 0403 115 261

Seed Savers meetings are an opportunity to learn more about locally grown plants, swap planting material, ask questions, share with and learn from other gardeners, preserve traditional and locally-suited plants (especially seeds). This is an informal gathering of gardeners - everyone is welcome, including those new to the area and to growing food.

## **Workshops**

### **BIODYNAMICS FNQ BASIC DAY** **Expressions of Interest**

Adam Collins from FNQ Biodynamic will be making and demonstrating how to make a commercial compost the Biodynamic way - on a large scale using machinery

**Sometime in June or July**

Anyone interested in learning how to do this is welcome to attend.  
If you would like to participate please contact Adam on 4097 8126

## **URBAN FARMING FOR NUTRIENT DENSE FOOD - Presented by Andrew McLennan**

### **Saturday 12<sup>th</sup> April - 9am to 2pm**

- |  |  |
|--|--|
| 1. Setting the scene World Food Security and Mineral loss. | 9. Brewing beneficial soil microbes at home. |
| 2. What makes a healthy soil.                              | 10. Soil Fertility and mineral balance.      |
| 3. Soil properties.  | 11. Soil conditioners.                       |
| 4. Basic soil chemistry.                                   | 12. Plant Brix reading and mineralisation.   |
| 5. Soil tests.   |  |
| 6. Humus, Humus inputs.                                    |  |
| 7. Composting.   |  |
| 8. Soil Food Web.  |  |

### **Saturday in June date to be confirmed - 9am to 4pm**

- |  |                              |
|--|------------------------------|
| 1. Small space growing systems.                                    | 6. Vermi composting.         |
| 2. Five easy steps to green thumb gardening using Greensmart pots. | 7. Plant stimulants.         |
| 3. Planning, planting and common individual plant needs.           | 8. Liquid fertilisers.       |
| 4. Trees in small places.  | 9. Foliar feeding.           |
| 5. Roof Gardens.   | 10. Chemical free Gardening. |
|  | 11. Building your own soil.  |

Workshops will be held in Cairns, venue to be advised at time of booking.  
Cost \$65 per event or \$120 for both workshops in April and June.  
Contact Tegan McBride at email: [tegan@gardenoftegan.com.au](mailto:tegan@gardenoftegan.com.au)

## **EARTHSHIP AUSTRALIA UPDATE**

### **Australia's first tropical earthship build 19<sup>th</sup> July – 1 August 2014**

The Venue: Ghost Gum Farm near Rossville in FNQ  
For more information contact:-

Scott White

Ghost Gum Farm Manager

07 4015 2339

[scott@ghostgumfarm.com.au](mailto:scott@ghostgumfarm.com.au)

<http://www.ghostgumfarm.com.au>

Check out the videos on this site and Mike Reynold's web site  
[www.earthship.com](http://www.earthship.com)

## **PERMIE RESOURCES, & SERVICES**

### **RESOURCES:**

**“Notes from the Workshops”** All notes from the Permaculture Cairns Resilient Communities Workshops are now available for purchase at the SPECIAL PRICE of only \$10. **For sale at the meeting and at Enviromart Australia in Aumuller Street,**

**TOPICS COVERED:** Growing your own Fabulous Organic Food, Earthworms, Microgreens, Wicking beds, Aquaponics, Composting, Creating a raised garden bed, Tropical plants that grow all year round and recipes for cooking these, Drying and preserving excess fruit and vegetables, Balcony and patio gardening, The Bokashi Bucket, Waste not want not – recycling organic waste, Poultry in the city, Vegetables for the small tropical farm or garden, and a Sprouting guide. **This is a MUST HAVE - full of local knowledge. Would make a great present for anyone wanting to grow their own food.**

**MORINGA TREES:** - phone Carol 0414900717

### **SERVICES:**

Bruce Zell, director of The Back Yard Revolution is a Permaculture Diploma graduate, Licensed Structural Landscaper and has extensive experience in landscaping, food garden design and implementation, project management and more. Contact Bruce for more details-

email: [brucezell@gmail.com](mailto:brucezell@gmail.com), [www.backyardrevolution.com.au](http://www.backyardrevolution.com.au) or  
Mob. 0404 9944 528



**Garden of Tegan – Planted up readymade moveable gardens, suitable for patio or balcony. A wicking bed of herbs and vegetables that will be enjoyed all year.**

**Contact Tegan 0402 853 903**

PS

It's Carol again, I bought a Refractometer so I can now check the Brix level in my plants and fruits. The Brix level is an indication of nutrient levels in leaves and fruits sampled at particular times of day. I will also try out some of the nutrient levels in the supermarket fruit and veg. Still working it out at present – will get back to you on this.

Time to start some seeds, keep them sheltered from heavy rain but in full sun if possible. Use coco fibre and compost or worm poo – no hard and fast rules but it needs to hold water and drain freely so as to allow air back into the mix. Fertilize with fish emulsion half strength about 7 – 10 days after they have emerged. Then at two weeks intervals thereafter till plant out.

March seedings: asian greens, beans, basil, capsicum, chilli, carrot, cauliflower, cucumber, daikon, eggplant, leek, potato, pumpkin, radish, rocket, open hearted lettuce, silver beet, spring onion, sweet corn sweet potato, taro, cocoyam, tomato

**Please note Memberships fees are now payable for 2014**

Memberships form may be completed online on our web site and emailed to us from there, payments may be made by direct credit to Permaculture Cairns, Cairns Penny Bank account -BSB 70-966 A/c 100009440 please use your Surname as reference.



## Permaculture Cairns

### Membership Form 2014

One year's membership fee - 1 Jan - 31 Dec:

☐ Household membership \$30    ☐ Renewing Member    ☐

Individual membership \$20    ☐ New Member    ☐

Name(s) of all applicant(s) & DOB if under 18yrs):

.....

.....

.....

Postal Address: .....

..... Postcode: .....

Phone(s): .....

Email: .....

Signature: .....

Payment may be made at Meetings, at Bank or Online Direct Deposit - Permaculture Cairns Account at Cairns Penny Bank in Grafton Street. BSB 704-966 Account No. 100009440 please include your Surname as reference.

Do you have skills that you would be willing to share that would be of help to Permaculture Cairns? If so please give details below-

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**Permaculture Cairns Public Meetings - All Welcome** Third Tuesday of month Feb to Nov (Second Tuesday Dec). Doors open 6.30pm, meeting starts at 7pm at: Flexible Learning Centre, 90-92 Clarke St. (off Hoare St), Manunda

### Enquiries

President: Carol Laing    [president@permaculturecairns.org.au](mailto:president@permaculturecairns.org.au)

Secretary: Tegan McBride:    [info@permaculturecairns.org.au](mailto:info@permaculturecairns.org.au)

Treasurer: Jenny McGrath    [treasurer@permaculturecairns.org.au](mailto:treasurer@permaculturecairns.org.au)

Website:    [www.permaculturecairns.org.au](http://www.permaculturecairns.org.au)