

# Permaculture Cairns June Newsletter

EMPOWERING COMMUNITIES WITH SUSTAINABLE SOLUTIONS



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

Permaculture Cairns Incorporated

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

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## PERMACULTURE CAIRNS

**LOOK !!! NEXT MEETING AND INFORMATION NIGHT WILL BE ON  
Tuesday 21<sup>st</sup> June 6.00 pm for a 6:30pm start**

Meeting Venue: ARC Disability Centre – 92 Little Street Manunda

**Members please bring a plate of finger food to share and a friend or two!**

Members are free but bring some change for a raffle ticket, non-members \$5

### AGENDA

Welcome to Members, new Members and Guests

Workshops and Events notices

Permaculture Principle Number 6 - a practical explanation.

We have two guest speakers tonight:

Kurt Pudniks, the candidate for the Greens in Leichhardt Division

And Kate from "The Power of Pallets"

If time allows maybe one or more short presentations on the following subjects -  
Book reviews, Plants, Mushrooms, Tools, Weeds, Pests, Recipes.

And if you have something to add please speak up.

About 8.15 we break for a cuppa and a chance to network with likeminded people.  
Check out the books our Members Library –finished and on the way home by 9.00pm

The change has been made so as not to clash with the Cairns Seed Savers Meetings

## Permaculture Principle No. 6 - *PRODUCE NO WASTE*

**“A stitch in time saves nine.” “Waste not, want not.”**

By valuing and making use of all the resources that are available to us, nothing goes to waste.

The icon of the worm represents one of the most effective recyclers of organic materials, consuming plant and animal ‘waste’ into valuable plant food. The proverb “a stitch in time saves nine” reminds us that timely maintenance prevents waste, while “waste not, want not” reminds us that it’s easy to be wasteful in times of abundance, but this waste can be a cause of hardship later.

## ***GROWING FOOD IN THE WET TROPICS IN JUNE***

Gardening in June is easy, but May was very wet and the plants didn't do well, some rotted off in the soil. Now the weather has changed and if your soil is balanced, plants will do well and insects won't be a problem.

Birds help to keep plants free from pests. Use the saucer of a large garden pot to make a shallow bird bath, this will encourage them into the garden. At home there are two willie wagtails, a number of sunbirds and other small insect eaters at work during the day especially in the mornings when watering and late in the afternoon.

This year we have had some plant failures due to soil-borne diseases. Of the 4 varieties of tomatoes planted, only one has survived. The mighty tough TROPIC variety. I have been growing this variety for 5 decades now and have found it and Roma to be the most disease resistant varieties to grow in the tropics. Other varieties may be ok when the weather is mild but when the weather becomes challenging Tropic and Roma survive. They will keep producing up until November when the weather becomes hot and very humid which stops fruit from setting.

Tropic is an excellent producer of large delicious fruit. When planting, use blood and bone with Potassium Sulphate added, compost if available and a good balanced fertiliser when planting. Side dress when fruit begins to set with the balanced fertiliser, heavy crops may need foliar sprays to fill out the fruit and to ensure flavour and colour. I have found that Nutritech Gold has been the best fertiliser I have ever used, it is a fully balanced, composted fertiliser with all the trace elements included. It is only available from Enviromart Australia on the corner of Scott and Aumuller. Happy, fruitful gardening. Cheers Carol

## ***PERMACULTURE CAIRNS VEGETABLE GARDENING WORKSHOPS***

**With Carol Laing**

Do you want to know how to grow nutrient rich food all year round in Cairns without harmful chemicals. This course will run for a number of weeks during June and July and you will learn how to improve your soil, what and when to plant, how to increase the organic matter and beneficial microbes in the soil.

How to recycle green waste and kitchen scraps through various methods such as: compost heaps, compost bins, wormfarms, bokashi bins and creating mulch.

Advice on plants to improve your soil, and how create fast shade.

If you are interested in learning how to grow really fresh uncontaminated food, email me so we can work out suitable dates and times. Numbers will be limited for each workshop which will allow everyone to have individual attention. Workshops can be during the week or on weekends, state your preference.

Half day workshops are best. There will be no charge for the first workshop to be held in June.

**Email: [carollaing@hotmail.com](mailto:carollaing@hotmail.com)**

## DATE CLAIMER FOR PERMACULTURE CAIRNS EVENT!!!!!!

**Sunday 3<sup>RD</sup> July – Johnstone River Community River Garden, Innisfail, for a tour of the garden and a picnic lunch.**

**BYO drinks, and a plate of food to share for lunch.**

**We will car pool so let us know if you are coming by emailing:**

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

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### *LOCAL WORKSHOPS AND EVENTS*

#### **AQUAPONICS WORKSHOPS WITH ROD INGERSOLL - 18<sup>th</sup> June**

Aquaponics is a simple organic gardening technique to grow fresh organic vegetables and herbs using fish waste that acts as plant food.

Aquaponics combines the best traits of traditional aquaculture (fish farming) and the use of water and nutrients to grow vegetables (hydroponics). Rod Ingersoll has been growing aquaponic vegetables for over 15 years and runs short courses on the subject to impart his knowledge.

His next workshops are scheduled for: 28<sup>th</sup> May (1/2 day) and 18<sup>th</sup> June (full day). Bookings can be made through his website <http://aquaponicgardener.com.au/aquaponicstraining>

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#### **Cairns Seed Savers Meeting – 18<sup>th</sup> June 2016**

Cairns Seed Savers is an informal group of individuals with a passion for saving seeds and growing fruit, vegetable and other useful plants that have been passed down through generations and are adapted to our local conditions.

WHEN: Sunday 19th 2016 WHERE: Sam's place, 9-11 Stamp St, Goldsborough Valley. Go over Pete's Bridge; up Goldsborough valley; Left into Mineshaft St; First Right into Stamp St. Sam's place on Left has bus and shed in drive on top of hill. PHONE: Sam 0403550214 OR Jo 40553053 WHAT TO BRING: • Organically grown, non-hybrid seeds for our Seed Bank • A plate of food to share for lunch • Your own chair, plate and cutlery • Your spare seedlings, cuttings, plants and produce for the Share Table

AGENDA: 10 – 11:15AM Meet'n'greet, general housekeeping, seed sorting and access to Seed Bank 11:15 – 12 Talk by Sam on the construction and maintenance of wicking beds. 12 - 12:30 Enjoy a shared lunch 12:30 – 1PM "Show and tell" of any great ideas/inventions.

Tour of Sam's property and fantastic artistic wicking beds – please wear closed shoes

**See you there!**

## **FNQ BIODYNAMICS - Energy Day Workshops**

**Sunday 19<sup>th</sup> June, 2016 10am to 4pm**

**At Wayne Rankines, Picnic Crossing Rd, Yungaburra**

Can we see or sense the energies of forces that we work with in Biodynamics?

How can we work with them?

We will have speakers on all types of energy forms that can be used in Biodynamic Agriculture in the morning .

Plus choose two practical workshops after lunch for you to learn how to work with energies that are of most interest to you.

- |   |                       |
|---|-----------------------|
| • Emoto's Messages from Water   | Rod Arbuckle          |
| • Stirring and water energies, Flowforms                              | Wayne and Max         |
| • Broadcast towers, Quantum Agriculture                               | Wayne Rankine         |
| • Dowsing and using a pendulum,                                       | Lewis O'Farrell       |
| • What is Radionics and Working with Radionic instruments on the farm | Cheryl, Odette Plozza |

Bring lunch or smoko to share, refreshments provided. This day is free of charge to all. Bring a pendulum if you want to work with Lewis later.

Further enquiries: Simon 40977837 Cheryl 40951119

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## **JUNE 2016 CALENDAR FNQ Community Exchange LETS Local Energy Trading System**

**MALANDA** - Saturday 4th 10 – 12 noon. Malanda Trade in the Park. Eacham Memorial Park, opposite the post office. Bring along morning tea to share, items to trade. There is a shelter, so it's an all weather event. Event Host: Katrin -40966755

**KOAH** – Saturday 4th 9am – 1pm Monthly Market and Trade at Koah Community Hall. You are invited to be part of the local Koah Monthly Marke, an excellent family friendly venue. \$5 per stall or 5B, set up from 8am. Event Host: Tonielle – 0422058995

**CASSOWARY COAST** - Sunday 5th 9 – 3pm Johnstone River Community Garden, Flying Fish Point Rd, Innisfail. Celebrating ECO Week and the Gardens 6th Birthday. Promoting the Gardens 5 Tenets of Sustainability and Garden Harvest Lunch. This is not a LETS Event. Event Host: Bernie - 0403523244

**ATHERTON** – Sunday 5th 10 – 12 noon – Make your own turmeric powder at Irene's Organic Garden, 17 Evans St. Bring your own fresh, washed turmeric or purchase from Irene's Edible Garden for 5B, a container for your processed turmeric pre- drying. Cost: 10B or \$10. Event Host : Irene - 0439914876.

ATHERTON – Tuesday 7th 9.30 – 12 noon – Make your own pavers at Irene's Organic Garden, 17 Evans St. Easy DIY pavers from cement with mosaic-style decorations. Suitable for all ages. All materials provided. Cost \$5 and 10B. Event Host : Irene - 0439914876.

JULATTEN - Friday 10th from 5.30 BBQ, Camp Fire & Trading, 8 Stevens Rd. Complimentary pumpkin soup and freshly cooked bread. Bring something to cook on the Webber or a plate to share, a chair to sit around the camp fire (weather permitting) and something to trade. Tables provided. Event Host: Germaine – 40941331

KANJINI – Friday 10th Sunday 13th Winterfest/Confest in the Tropics - is a visioning gathering on private land. We invite all beings; individuals, regional group representatives and leaders to join us in preparing the blank canvas for an annual Confest Event in Tropical North Queensland. This is not a LETS event. Event Host: Melinda - 0400798425 or more details on <https://www.facebook.com/events/1720555271541577/>

RAVENSHOE – Saturday 18st 12 - 2pm Trade afternoon Youth Shed, Ravenshoe Community Centre, 3 Bolton Street. Following Community Gardens gathering - come and check it out. Child friendly event. Bring something to trade and some lunch to share. Event host: Kathy - 40977864

ATHERTON – Saturday 18th 6-9pm Irene's Dinner & Trade night, 17 Evans Street. Please bring along a plate of Gluten Free Indian fare and something to trade. Event Host: Irene - 0439914876

CASSOWAY COAST – Sunday 19th 11am – 3pm LETS Trade. Flying Fish Point Rd, Innisfail. Bring Lunch to share (BBQ available), items to trade, information on services offered and some good conversation as well. Please consider BYO plate & cutlery to save our host excessive dish duties. Car pooling recommended when making the trip from the Tablelands. Event Host: Bernie - 0403523244

MALANDA - Tuesday 21st 10 – 1pm Workshop - Fermented Foods & Drinks, Uniting Church Hall, Mary St, Malanda. Cost \$20 + 30B. Bookings essential. Event Host: Jayne - 0403208551 or email [jayelizeva@gmail.com](mailto:jayelizeva@gmail.com)

YUNGABURRA – Saturday 25th 12 - 2pm that retro café Trade Afternoon. This event is immediately after the Yungaburra Market. Bring along something to trade a rug to display your wares. 100% Bartles for drinks from the menu, you will need cash for lunch and drinks from the display fridge. Please be mindful when setting up to keep the path clear at the front of the shop. Event Host: Melitta - 40952340

CAIRNS CITY - Sunday 26th 12- 2pm - Lafew Teahouse, 33 Sheridan Street. LETS relies on member initiative and participation to make events happen - At Lafew we offer: kombucha, tea and coffee, available 50/50 B/\$. Bring your trading sheets and goodies. For new members - please drop by and chat to the LETS traders, you can sign up on the day. Event Host: Lorna – 0475762838

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.

[fnqces@gmail.com](mailto:fnqces@gmail.com) - 4096 6972 - [www.fnqces.org](http://www.fnqces.org) - [www.communityexchange.net.au](http://www.communityexchange.net.au)



# EVENTS & NEWS FROM HOME AND AROUND THE WORLD

## Beyond Crisis

### From Resilience online newsletter

by [Alejandro Panés](#), originally published by [Future Perfect blog](#) | TODAY

Community currencies created by groups in Spain in response to the economic crisis alter fundamental aspects of the economic system and favor a more just society.

Jesús G.C. is a carpenter, and he lives in Jerez de la Frontera, Spain. A year after making the city his home, he came into contact with the network of a local community currency called the “zoquito.” He applied for his membership card and started trading carpentry jobs for other goods and services. “When I got here I didn’t have a job. I found out about the social currency and I decided to try out barter,” he says. Like him, about a hundred people are members of this network, in which the means of transaction, the *zoquito*, is a fictitious currency of trust-based mutual trade. It is fictitious not because it does not exist – you can indeed buy things with it – but because there is no tangible currency: trades are recorded on a card.

Jesús’ latest transaction was to swap carpentry work with a woman seeking a wooden slab to dance flamenco. As payment, she subtracted 45 *zoquitos* from her card and he added the *zoquitos* to his card. “Now, I can buy meals from her at 8 *zoquitos*. I used to pay 7, but the meals she makes are both tasty and hearty, so now it’s 8. In fact, she comes over to have lunch with me.” Like them, many users start out rendering services in exchange for *zoquitos* and end up bartering like in time banks. “It also helps me in looking for a job,” says Jesús. “If someone needs a carpenter, first they’ll ask if there’s one in the network.”

The whole idea first occurred to Maki Iizuka, a Japanese woman who came to Jerez attracted by flamenco more than 15 years ago, and who now runs an intermittently-open restaurant of Japanese and vegan food. Of course, her restaurant accepts *zoquitos* as payment for a meal. Maki had in mind the community currencies that emerged in her own country in response to the economic crisis two decades ago, and decided to try the same thing in Jerez. Together with her husband, Nicolás Patris, and other members of El Zoco association of consumers of organic products, she got down to work and more people started joining up. Now, members number nearly a hundred, and to celebrate their tenth anniversary, they aim to host the next Spain-wide meeting of community currency networks.

### Great diversity

However, the *zoquito* is far from being the only community currency in Spain. According to Julio Gisbert, the founder of the Spanish Institute of Community Currency and author of the book and blog *Vivir sin empleo*, [Living without a job] there are now some 70 to 80 supplementary community currencies. And he emphasizes “supplementary” because “the term community is very elastic.” The type Julio is referring to is more technical in nature, and relates to the generation of such currencies. “One type are mutual credit currencies like the *zoquito* or the *puma* in Seville which, like time banks, are based on the exchange of

resources, goods and services. The second type are currencies backed by a legal currency like the *ekhi* in Bilbao, which can be acquired in exchange for euros. The third are fiduciary currencies that are created on the basis of nothing.” His blog has a collaborative map showing many of these.

The *boniato*, which has been in operation in Madrid since 2013, is of this third type owing to its use of loyalty. The currency is created when a customer makes a purchase in euros in a shop at the Community Market of Madrid (MES). Every purchase receives a credit in *boniatos* that one can later use to buy things in associated businesses, which then spend the *boniatos* in other companies or shops of the community market, such as suppliers.

But the *boniato* can also be said to belong to the second category, at least once a year. Last summer, during the Third Fair of Community and Solidarity Economy in the Matadero of Madrid, more than 30,000 euros in printed *boniatos* were exchanged for spending on the products and services of MES entities during the event. In turn, these entities can exchange their *boniatos* for euros when they have a surplus.

### **More than just a response to the crisis**

Community currency is a response to both situational and structural factors. That is, it acts as a vehicle of exchange for people and retailers who are most vulnerable to the crisis and it alters some of the axioms of the prevailing economic system that generate inequalities. A community currency is not a value deposit: it yields no interest, there is no interest in accumulating it, and it catalyzes the local economy. In short, it brings about a change in the habits of consumption, financing and interaction between people.

“Of course it is not, on its own, a remedy to the economic crisis. Many of the groups that back these currencies want a more just society, a different society,” says Julio Gisbert. “There are currencies that are an alternative to the system and others that supplement it...However, there are very few users; perhaps 95 percent of Spain’s population has never even heard of them. This is a minority movement.”

Accordingly, each supplementary or community currency has its own functions, aspirations and objectives. “The *zoquito* network is, above all, a space for self-education. We carry on small-scale work, slowly but surely,” states Maki Iizuka. “Before we create a new economy, a new way of working as a community, we have to unlearn things. If not, there is no room for learning. Change takes time. The main goal is for community people to have their basic needs met. We have to be able to see people, not only numbers.” People like Jesús, who not only have the opportunity to practice their professions in the network, but can also help others and make Friends while they’re at it.

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## **A SALUTE TO THE HOMEGARDEN**

[A short extract from a conversation with Tonesmeire in the ACRES USA magazine.](#)

**ACRES U.S.A.** Shifting gears again, what is a homegarden, spelled as one word as opposed to a standard home garden? How are homegardens a boon to carbon farming?

**TOENSMEIER.** One of the oldest agroforestry systems in the world is called the tropical homegarden, which doesn’t make sense in English. What it means is highly diverse planting near

and around the house on an intimate scale with trees, shrubs, vines, herbs, annual crops and often small livestock — what is often known in the United States as a food forest or forest garden. It was a result of the permaculture movement, but it's an idea that goes back as far as 13,000 years in some parts of the world. They have excellent levels of carbon sequestration and excellent levels of biodiversity. At the small scale, the homegarden is one of the most powerful tools that we have.

**ACRES U.S.A.** Can it work on a tiny scale such as a typical American homestead of an acre or less?

**TOENSMEIER.** Absolutely. I have one here on a tenth of an acre, 300 species, not too many of any one species. That includes 50 species of fruit, mostly berries. There isn't room for 50 kinds of trees, so our trees are mostly dwarf and semi-dwarf trees. We have three species of bamboo, 70 or 80 species of perennials with edible leaves, and we grow some annuals. We raise fish and poultry and soldier flies and silkworms, so we have a small, highly biodiverse carbon-sequestering system. When we got here in 2004, our soil organic matter was 2.5 percent, and now it's gone up to 9 percent. Some of that comes from wood chips and compost we applied. We don't get credit for all of it, but it does appear to be a system that is actually sequestering carbon in the soil and in the biomass as well.

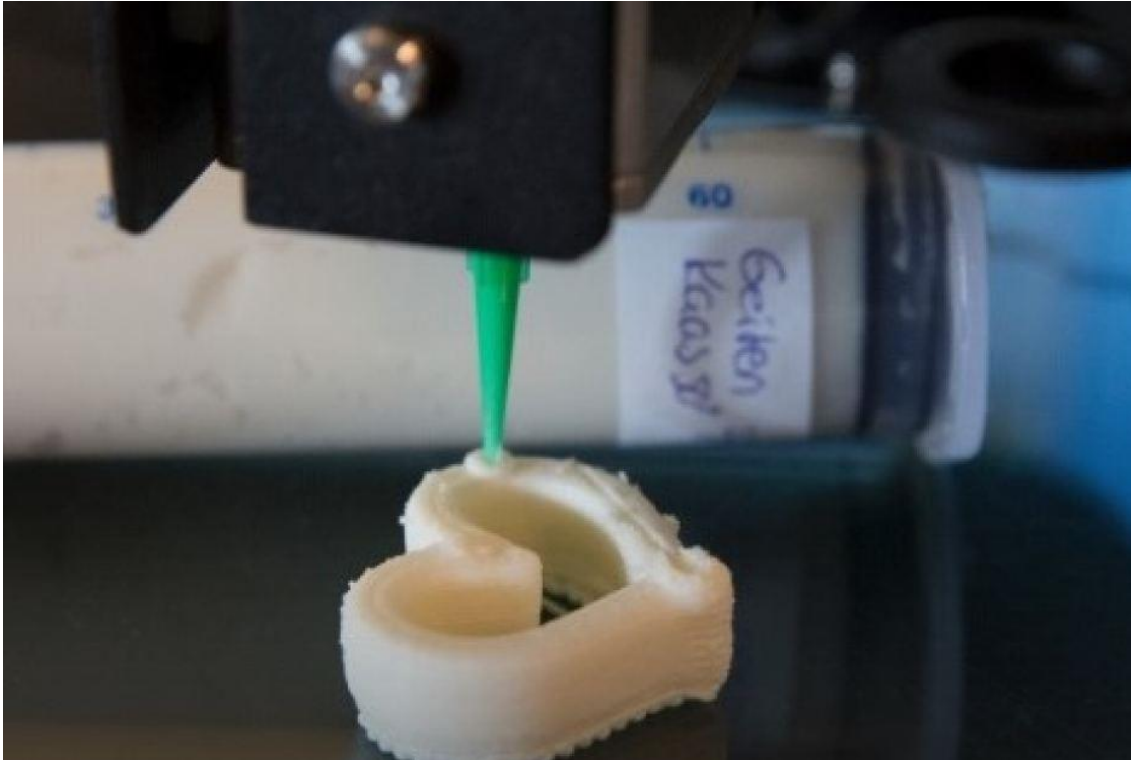
**ACRES U.S.A.** What would be included in a basket of policy changes that you would like to see for the kind of future you propose?

**TOENSMEIER.** Internationally we need to rebuild or replace the World Trade Organization because so many of its provisions prevent many countries from providing payments to their farmers for environmental services such as sequestering carbon. The United States is able to get away with it, but many countries are not. At the international level that's a big policy barrier. The kind of structural adjustment loans that countries get often require them to industrialize their agriculture in what *Acres U.S.A.* might consider an unsustainable fashion, and I would agree. That's at the international level. At the national level they could start getting rid of the incentives and subsidies for unsustainable agriculture. We need money for research. We need money for education. We need money for breeding some of these perennial crops. The big thing that would make a difference would be payment for environmental services for carbon sequestration, explicitly. We have the USDA EQIP program right now that pays farmers to carry on lots of different kinds of soil and water conservation activities, many of which happen to sequester carbon, but they won't pay for you to do that as such right now.



# 3D printed cheese creates niche market for Dutch dairy farmer as milk price falls below cost of production (*thinking outside the square*)

From ABC news



A Dutch dairy farmer faced with falling milk prices has begun a 3D printed cheese business as a way to value-add her product.

Michaëla van Leeuwen farms in the eastern region of the Netherlands, and launched her 3D printed cheese product at a Dutch food conference in April.

Ms van Leeuwen said she started to think about diversifying after the farm gate milk price dropped in the Netherlands, and she and her husband were forced to relocate their farm.

*As a Valentine ... you can have a sculpture of your husband in gouda cheese.*

Michaëla van Leeuwen, dairy farmer

She had been introduced to 3D printing through some work she was doing off the farm, and started investigating if it was possible to print cheese.

"I searched if there was anyone who printed with cheese, because chocolate was already being used," she said.

"I found out that nobody had tried to print with gouda cheese or fresh cheese.

"So I started a project and found that it was possible to print with fresh gouda cheese."

Ms van Leeuwen said she pre-made a soft cheese, then used the printer to create different shapes.

She said she aimed to use the printer in her cheese store to make custom cheese shapes.

"If you want to give your husband for a Valentine yourself as a sculpture, then you can say to your husband that you are delicious," she said.

"You can have a sculpture of your husband in gouda cheese."

## **Low prices impact on farmers**

Ms van Leeuwen said the farm gate milk price in the Netherlands had dropped below the cost of production for Dutch farmers.

*[Consumers] want to hear the story, they want to meet the farmers, they want to see the cows in the fields.*

Michaëla van Leeuwen, dairy farmer

"We get about 28 cents per litre. Last year it was 40 cents and that was a good price," she said.

"If the farmers want to earn something, then the price has to be 35 cents a litre."

She said printing cheese created a niche product and allowed her to build a relationship with her customers.

"Our price at the moment is very low in Holland for our milk," she said.

"I use the printer to communicate with our consumer and explain how our cows are living and how we take care of them."

## **Niche product adds value to milk production**

Ms van Leeuwen said farmers faced with low prices could use niche products and marketing to add value to their milk production.

She said her 3D printed cheese and the marketing she had done to gain momentum had helped "tell the story" of her business.

"People in Holland are searching [to know] where their product is from," she said.

"[Consumers] want to hear the story, they want to meet the farmers, they want to see the cows in the fields."

Ms van Leeuwen said she would like to look into selling 3D cheese printers to cheese makers and dairies.

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**Recycling Plastics – this is amazing !!!!! Must watch !!!!**

**Spread the Know-how, Boost plastic recycling!**

**Check out the video on the web site**

**Preciousplastic.com**

**They have developed machines to recycle plastics and will share the blueprints online FREE**

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# A sprinkle of compost helps rangeland lock up carbon

By **Carolyn Lochhead**

Updated 2:44 pm, Friday, October 31, 2014

From: [Sfgate](#)

A compost experiment that began seven years ago on a Marin County ranch has uncovered a disarmingly simple and benign way to remove carbon dioxide from the air, holding the potential to turn the vast rangeland of California and the world into a weapon against climate change.

The concept grew out of a unique Bay Area alignment of a biotech fortune, a world-class research institution and progressive-minded Marin ranchers. It has captured the attention of the White House, the Brown administration, the city of San Francisco, officials in Brazil and China, and even **House Republicans**, who may not believe in climate change but like the idea that “carbon farming” could mean profits for ranchers.

Experiments on grazing lands in Marin County and the Sierra foothills of Yuba County by UC Berkeley bio-geochemist Whendee Silver showed that a one-time dusting of compost substantially boosted the soil’s carbon storage. The effect has persisted over six years, and Silver believes the carbon will remain stored for at least several decades.

The experiments were instigated by **John Wick** and his wife, Peggy, heiress to the Amgen biotech fortune, on a 540-acre ranch they bought in Nicasio. What began as a search for an artist’s studio turned into a seven-year, \$8 million journey through rangeland ecology that has produced results John Wick calls “the most exciting thing I can think of on the planet right now.”

## **Spreading scraps**

The research showed that if compost from green waste — everything from household food scraps to dairy manure — were applied over just 5 percent of the state’s grazing lands, the soil could capture a year’s worth of greenhouse gas emissions from California’s farm and forestry industries. The effect is cumulative, meaning the soil keeps absorbing carbon dioxide even after just one application of compost, the researchers found. In theory, Silver calculates, if compost made from the state’s green waste were applied to a quarter of the state’s rangeland, the soil could absorb three-quarters of California’s greenhouse gas emissions for one year, due in large part to the one-time offset from waste diversion.

“For a lot of people, this sounds a little fantastic,” Silver said. “There’s nothing magic about it.” Soil is a major source of carbon, “and we’ve been bleeding it into the atmosphere for many, many years through plowing, overgrazing and poor agricultural practices,” Silver said. “So anything we can do to get some of that carbon back into the soil is going to be beneficial.”

## **Simple science**

Unlike high-tech geo-engineering schemes to pull excess carbon dioxide from the air and stick it in old coal mines or under the ocean, applying compost is a simple way of creating what scientists call a positive feedback loop.

Plants pull carbon dioxide from the air through photosynthesis and transfer a portion of the carbon to the soil through their roots. Soil microorganisms then turn the carbon into a stable form commonly known as humus.

This not only sequesters the carbon but improves the soil's fertility, boosting plant growth and capturing more carbon while also improving the soil's ability to absorb and retain water.

Wick says that since he started spreading compost on his ranch, he's seen an increase in native perennial plants and bird life, and "we now have green grass year round during a drought."

"We stepped into a crashing system and we bumped it once and it corrected," Wick said.

### **Chance discovery**

The project began almost by accident. **Peggy Wick**, a children's book illustrator and author, was looking for a larger studio, and the Nicasio ranch had a barn that fit the bill. The couple immediately removed the cattle, John Wick said, because "we were confident that they were destroying the environment."

In short order, weeds and invasive plants began to take over. So the Wicks hired rangeland ecologist **Jeff Creque**, who suggested changing grazing patterns to mimic the migrations of wild herds of ruminants that co-evolved with grasslands. The results were promising, and they wanted to test Creque's theory that the new grazing was increasing soil carbon.

They approached Silver. She told them, "I doubt it, and I doubt we could measure it," John Wick said.

With the cooperation of other ranchers, Silver and the Wicks began soil tests on 35 plots in Marin and Sonoma counties. Initial surveys showed that old dairy ranches had higher soil carbon, but they knew that the greenhouse gases emitted from raw manure would negate any advantage.

So Silver suggested adding compost, a more stable form of carbon. She began scientific tests on plots in Nicasio and at a research site in the Sierra foothills. The results surprised her.

"We need to reduce our fossil fuel emissions — there's just no way around that problem," Silver said. "But this is one of the things that we can do that certainly can make a difference. It's inexpensive, it's low technology, it's good land use, it solves multiple problems."

### **Degraded lands**

Grazing is the single largest land use on the planet, and most grazing lands are degraded, meaning they have lost carbon. That includes California's coastal and Sierra foothills, where invasive plant species have displaced native perennials that have much deeper roots and store much more carbon.

The good news is that by returning carbon to the soil in a stable form such as compost, soils can be restored, said **Rattan Lal**, director of the **Carbon Management and Sequestration Center** at Ohio State University.

"Whether it's eroded, whether it's compacted, whether it's salinized, nutrient depletion is a very big factor in cropland and grazing land," Lal said. "And the more degraded the lands are, the more the need they have of putting carbon back in the soil."

Lal considers it essential to restore carbon to the world's soils, regardless of whether it combats climate change. "The other reasons are much more pressing," he said. "Food security, water quality, biodiversity, other environmental issues are related to soil. And in addition to all that, it does also offset some of the carbon emitted by fossil fuel combustion."

### **Daunting logistics**

But the logistics of spreading compost over even a small fraction of California, much less all the rangeland of the world, are daunting. There is simply not enough compost being made for such a project. As low-tech as making and spreading compost is, it takes money.

Enter the city of San Francisco, which composts 700 tons of residential and commercial organic waste every day, the largest such operation in the world.

"I've been in the recycling business for 30-some years here in San Francisco, and this just was much more transformative than the various things we were trying to do to stop putting carbon into the atmosphere," said **Kevin Drew**, zero-waste coordinator for San Francisco's **Department of Environment**. "To turn around and start taking it out of the atmosphere was a really revolutionary idea, particularly when it was as simple as putting compost on rangeland."

The city has begun working closely with the Marin Carbon Project, a nonprofit founded by the Wicks. The project is funded in part by the Rathmann Family Foundation, started by Peggy Wick's father, George Rathmann, the late founder of **Amgen Inc.** and a leading figure in the biotech industry.

With ample financial resources, the project has stitched together a network of ranchers, government officials, scientists and nonprofits that aims to take the compost concept not just across California, but across the nation and the world.

"We have no illusions that this is something that is going to happen at a backyard scale," said ecologist Creque. "This has to be a global ecosystem restoration effort."

### **Cap and trade**

Efforts are under way to incorporate soil carbon offsets in California's cap-and-trade system, so ranchers could earn credits for spreading compost. The American Carbon Registry, an organization that certifies offsets, on Thursday approved one for compost additions to rangeland. Many see a faster approach through the Natural Resources Conservation Agency, an arm of the U.S. Agriculture Department that was formed after the Dust Bowl of the 1930s to halt soil erosion. The agency is incorporating carbon planning into its voluntary national farm conservation protocols.

"All we're doing now is the same thing we've been doing" since the Dust Bowl, said **Adam Chambers**, an air-quality scientist at the agency.

The department is building a carbon farming model that includes compost along with three dozen basic practices that help restore soil carbon, such as no-till farming and cover crops. Adding compost "builds up the water-holding capacity of the soils very quickly and jump-starts the system," Chambers said. "You can change the system pretty quickly."



In June, John Wick touted the benefits of spreading compost on rangeland at a House Natural Resources Subcommittee hearing chaired by Rep. Rob Bishop. The Utah Republican described such efforts as a “win-win” approach to the environment that could help ranchers.

On Oct. 8, the White House named the Marin Carbon Project in a report on how agriculture can improve climate resilience. Gov. **Jerry Brown**’s office is planning a site visit to the Wicks’ ranch. Talks are under way with officials in Brazil and China.

**Guido Frosini**, farm manager at True Grass Farms near Bodega Bay, already manages his livestock to mimic wild migratory herds on 1,200 acres. Working with the Marin Carbon Project, he plans to add compost to accessible areas.

“When you’re looking at spreading compost on 1,200 acres, there’s no way I can come up with the money to do that,” Frosini said. “But if we just start incrementally, doing it initially 10 to 15 acres at a time, it will pay off within a lifetime.”

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**If you are in the area, go, it is amazing**

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## **Recycling on steroids**

### **Syrian Artists Set Guinness Record By Building World's Largest Mural Out Of Recycled Goods (PHOTOS)**

Article from The World Post 31 May 2014

DAMASCUS, March 31 (Reuters) - A group of Syrian artists in Damascus has created the world's biggest mural made of recycled materials, a rare work aimed at brightening public space in a city sapped by war and sanctions.

The brightly coloured, 720-sq metre work was constructed from aluminum cans, broken mirrors, bicycle wheels and other scrap objects and displayed on a street outside a primary school in the centre of the Syrian capital.

The mural's lead artist, Syrian artist Moaffak Makhoul, said the idea behind the project was to give ordinary people a chance to experience art and relieve some of the pressures of daily life as the country's three-year-old conflict grinds on.

"In the difficult conditions that the country is going through, we wanted to give a smile to the people, joy to the children, and show people that the Syrian people love life, love beauty, love creativity," he said.

Guinness World Records has declared the work the world's largest mural made of recycled materials.

Syria is sunk in a civil war that has killed over 140,000 people, forced millions more to flee their homes and devastated much of the country's infrastructure, economic activity and urban life.

Central Damascus has been relatively shielded from the worst fighting, although a little over a year ago rebels controlled a ring of suburbs and were launching incursions that threatened government control over parts of the city centre.

Gains over the past few months by President Bashar al-Assad's forces in Damascus' outskirts and along the nearby Lebanese border have strengthened the government's grip on the capital.

Makhoul said he saw the mural as a fitting project for the times because it could help ease the frustrations of normal people. "I found it to be the most appropriate time for this. Now is when we need to do something," he said.

"I've been sad to see a lot of my colleagues, artists, all traveling abroad and leaving. God be with them and give them luck - but the country also needs all of us."

The mural took about six months to complete and was finished in January with the help of about six artists. Students at the school nearby said they were happy with the completed work. "It's really great - it's made me more excited to come to school," said one student, Shams Khidir.

Mohamed, another passerby, said he had watched the project develop from its beginning while passing by the wall.

"It's really great work. It made me feel we can benefit a lot from things we aren't using," he said.



*Syrian Moaffak Makhoul and a team of six artists pose with their Guinness World Record awards for the largest mural made from recycled material, on March 31, 2014 in Damascus's al-Mazzeh neighborhood. (LOUAI BESHARA/AFP/Getty Images)*

*A close up of a decorated wall that won the Guinness World Record in Damascus's al-Mazzeh neighborhood, on March 31, 2014. (LOUAI BESHARA/AFP/Getty Images)*





*Syrians walk through a decorated wall that won the Guinness World Record for the largest mural made from recycled material, on March 31, 2014 in Damascus's al-Mazzeah neighborhood. (LOUAI BESHARA/AFP/Getty Images)*



*Syrian artist Moaffak Makhoul poses near his decorated wall after it won the Guinness World Record for the largest mural made from recycled material, on March 31, 2014 in Damascus's al-Mazzeah neighborhood. (LOUAI BESHARA/AFP/Getty Images)*





LOUAI BESHARA via Getty Images

*Syrians walk through a gate on a decorated wall that won the Guinness World Record in Damascus's al-Mazzeah neighborhood on March 31, 2014. (LOUAI BESHARA/AFP/Getty Images)*



LOUAI BESHARA via Getty Images

*Syrians walk past a decorated wall that won the Guinness World Record for the largest mural made from recycled material, on March 31, 2014 in Damascus's al-Mazzeah neighborhood. (LOUAI BESHARA/AFP/Getty Images)*



## LOOK WHAT IS HAPPENING IN THE USA

(What happens in the USA usually takes place in Oz after a few years so let's be forewarned'. This is a story of how the ordinary everyday person can fight back against the big companies and the corrupt government officials - Editor)

### Faced With a Fracking Giant, This Small Town Just Legalized Civil Disobedience

From Resilience online newsletter

by [Kate Stringer](#), originally published by [Yes! Magazine](#) | TODAY



*Pennsylvania township first to legalize civil disobedience. Photo from [Invisible Hand](#) documentary © [Public Herald](#).*

A tiny community sitting on a 27-square-mile piece of Western Pennsylvania wanted to send a big message to the energy company planning to deposit toxic fracking wastewater under its neighborhoods. And its 700 residents wanted it to be perfectly legal for them to loudly object.

Grant Township had seen what happens when people nationwide take to the streets to protest bullying corporations: Arrests. Lots of them.

So Grant Township planned ahead. Two weeks ago, it passed a law that protects its residents from arrest if they protest Pennsylvania General Energy Company's (PGE) creation of an injection well.

Residents believe this law is the first in the United States to legalize nonviolent civil disobedience against toxic wastewater injection wells. "We're doing it to safeguard the residents and protect as many people as possible," Township Supervisor Stacy Long said.

Long said legalizing direct action is a response to the ongoing problem of rural residents seeing their voices excluded from discussions between state governments and big corporations on issues that have local ramifications.

PGE wants to repurpose an existing well in Grant Township into a Class II disposal well. These wells are used to deposit toxic wastewater deep underground. The wastewater is a byproduct of oil and gas drilling and can contain toxic metals, benzene, and radioactive materials, [according to the Natural Resources Defense Council](#). The Environmental Protection Agency (EPA) estimates 180,000 Class II injection wells currently operate, injecting more than 2 billion gallons of brine a day. About 20 percent are disposal wells.

While the EPA [claims](#) injection wells are safe, the toxic contents of the wells don't always remain in the rock layer where they've been deposited. A [ProPublica review](#) found structural problems reported for 17,000 wells between 2007 and 2010.

The Grant Township community relies entirely on private wells and springs for their drinking water, Long said. Like so many other people in communities dealing with fracking and its waste, residents worry the injected wastewater will leak into their drinking-water sources.

The town's new law has yet to be tested in courts, but it's just the latest legislative move in a three-year battle Grant Township has had with PGE since the energy company first announced its plans to convert a well for fracked wastewater disposal.

The community enlisted the aid of the Community Environmental Legal Defense Fund (CELDF), which helped it to pass an ordinance in 2014 that established a community bill of rights guaranteeing clean air and water and excluding injection wells. PGE sued, and in 2015 a judge ruled that the town couldn't ban an injection well.

Next, the community changed its municipality status from a second-class township to a home-rule municipality in the hopes that reinstating the ban against the injection well as a new type of municipality would give it more legal power. Long said home-rule municipalities have a greater say in decisions that are made about their community.

"The existing system is not providing communities with the legal tools to protect themselves," said Chad Nicholson, Pennsylvania community organizer with CELDF.

PGE needs one more permit before it can create the injection well. The company already received a permit from the EPA but is still waiting on one from the Department of Environmental Protection. The department gave PGE a permit in 2015 but revoked it a few months later, [saying it needed to review additional criteria](#).

Industry's position is that injection wells are the least expensive and most environmentally friendly way to dispose of fracking wastewater.

But for Long, there is no place safe enough to pour toxic liquid into the ground. "I was elected to keep everything clean and nice and that weighs heavily on me," Long said. "It's going to have to be bodies in the road to stop those trucks if the courts fail us."



Please **PRINT – SIGN – SCAN** and **RETURN** by email to  
treasurer@permaculturecairns.org.au.



## Permaculture Cairns

### Membership Form 2016

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

- |  |                                       |
|--|---------------------------------------|
| <input type="radio"/> Household membership \$30  | <input type="radio"/> Renewing Member |
| <input type="radio"/> Individual membership \$20 | <input type="radio"/> New Member      |

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

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Postal Address: .....

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

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Payment may be made at Meetings, at Cairns Penny or Online Direct Deposit to Permaculture Cairns A/c at Cairns Penny in Grafton Street. BSB704-966 A/c No. 100009440 please include your Surname as reference.

If you have a Permaculture Design Certificate could you please complete the following survey.

YOUR NAME: .....

Who was the Course Presenter: .....

When did you do the Course: .....

Where did you do the Course: .....

Permaculture Cairns Public Meetings - All Welcome Every second month on the Third Tuesday of month Jan to Nov (Second Tuesday Dec). Doors open 6pm, meeting starts at 6.30pm at: ARC Disability Centre, 92 Little Street, Manunda

### Enquiries

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