You probably do it in your backyard and even some cafes and restaurants do it. Peter Cundall does it. Composting - that dark, friable stuff that once started out as scraps and rubbish is the king of conditioners for soil.

“When I first started growing vegetables I was spraying them a lot and thought: ‘this is going to kill me and I don’t know about the poor beggar that’s going to have to eat it’. I thought there’s got to be a better way. People got by without these chemicals for many years before they came along. Maybe we’re going to have to get by without them again.”

Paul Le Feuvre grows 100 hectares of zucchinis and hundreds of mangoes in Giru, south of Townsville. He’s a passionate farmer, not scared of challenges, committed to doing the best he can do by the environment as long as he makes money. He walks around the farm with bare feet and blue shorts happily talking about how he grows food.

He’s been doing his best to eliminate chemicals during the 21 years he’s been farming. Now he’s going to make tonnes and tonnes of his own compost to improve soil structure and replace fertilisers.

The Le Feuvers spent $80,000 on a large machine that makes compost. It turns raw materials in long windrows two metres wide and 1.5 metres high, mixing them and spraying them with water to ensure they’ve got 40 per cent moisture. At the end of the process it even makes compost tea or liquid. Chicken manure, sorghum, hay and clay will go in the mix to make compost.

The financial pain of funding the compost maker was reduced somewhat because the Le Fuevres received funding through the Australian Government’s Reef Rescue initiative in conjunction with NQ Dry Tropics. Queensland horticulture industry group Growcom helped the Le Fuevres do a farm management plan in preparation for the funding.

NQ Dry Tropics’ Brett King says the funding application he got from the Le Feuvers was different. “We got 30 applications from growers in our region for Reef Rescue funding and we funded Paul’s because it’s innovative and is an initiative that could be seen as best practice in future.

The Le Feuvers market their fruit and vegetables directly. They don’t leverage off the biological approach they take although they use far less chemical fertilisers and pesticides. Their zucchinis and mangoes are sold as conventional and he disputes that it might cost more to produce fruit and vegetables this way. “I think it costs less. I’m a lazy sod. Some people do recreational ploughing etc. We don’t. We use the same trickle tape for four years, we don’t dig it up.

“I reckon if we [farmers] stopped digging up our dirt straight away, we’d make the biggest impact we could ever make for soil organic matter, soil health and fertiliser use.”

For more information, contact NQ Dry Tropics, 07 4724 3544
Encouraging best practice management change in the areas of nutrient, pesticide and soil management has seen land managers across the Burnett Mary region undertake a range of improved measures.

They have constructed silt traps and utilised latest research and technology for spray applications, fertilisers and irrigation. In addition to adopting these improved practices, best practice management also includes protecting on-farm wetlands.

WetlandCare Australia has been working in partnership with BMRG to provide technical support to land managers in how best to manage and protect their on-farm wetlands to ensure they reap the benefits of the range of production processes that wetlands can provide. For example, wetlands regulate irrigation, improve pest management, help stabilise banks and provide erosion control and provide flood management. They are also a great place to fish, put the boat in or have a swim.

Under the Reef Rescue initiative, three neighbouring properties in Brooweena have worked together to successfully help protect a regionally prioritised wetland in the Upper Munna Creek catchment. Apart from being an important habitat for waterbirds and assisting soil stabilization, this wetland helps to filter farm run-off thereby improving the quality of the water entering the catchment. By fencing off Upper Munna and Amarama Creeks and putting in off stream watering points, they have protected the area from the impacts of their stock. Unrestricted cattle access had damaged the vegetation and creek banks, causing erosion and a decline in water quality.

Malcolm Beresford, one of the property owners, said “The creek was getting very overgrown with Lantana and weeds and pests...if we can fence off the creek, control the lantana, keep the stock away from the creek banks, get the native grasses and blue gums to come up, we can restore it to its natural state. The profitability on the land is not what it should be, so any financial help is appreciated.”

This year, although the Burnett Mary Region has received less funding than last year, the demand has grown considerably. 2010 has seen 158 projects approved so far, with Australian Government investment and land manager contributions coming to a combined value of over $4.5million.

Mark Casswell, Operations and Program Manager with BMRG said “the response to the Reef Rescue program has been overwhelming, the quality of the projects being put forward and the enthusiasm of the region’s land managers to the program have been extraordinary”.

For more information, contact Burnett Mary Regional Group, 07 4181 2999
It’s a radically different way to water cane and has neighbours looking over the fence. It uses far less water, increases yield and really improves the quality of water that runs off farms.

Paul Villis grows cane near Ayr and he’s trialing trickle, or drip, irrigation on part of his farm. Trickle irrigation comprises rows of plastic tape buried underground that delivers water directly to the roots of the plant through tiny drippers that regulate water flow.

Ayr is in the heart of the Burdekin region and all sugar grown here is irrigated. Most farms are irrigated by flooding the inter-rows which is labour intensive but, from an infrastructure point of view it’s cheap.

Not all irrigation systems in the Burdekin are metered, making water quite inexpensive for some growers. Paul’s channel water is metered. Burdekin farmers are under increasing pressure to improve the quality of water running off farms and into lagoons, creeks and into the water table. There are some sugar growing areas that aren’t viable anymore because of salinity.

The trickle block is using a lot less water than the flood blocks but they don’t know how much less at this stage.

Paul’s comfortable with the idea of trickle irrigation because he used to grow corn and beans in Bowen. Most of his cane blocks are flood irrigated but he installed trickle on a small area because the shape and form of the blocks weren’t suited to flooding - he was getting unreliable watering. He has seven hectares under trickle with potentially more to come.

Trickle irrigation is a lot more expensive than flood infrastructure. Paul weighed up spending the money laser leveling the problem blocks or installing trickle, both costs were comparable.

Trickle tape costs $3,500 a hectare alone. Other infrastructure, like pumps, filters and computerised timers, is on top of that. Paul says, “It’s a 10 year project really. You’ve got to look at the life of it. The life of the tape is 10 years plus.”

Funding through the Australian Government’s Reef Rescue program made the conversion much more affordable.

Paul Villis says they’re not rushing in to convert other blocks to trickle unless there are good incentives to do so like water restrictions or price increases in future. He says they’ll be the driving influences as to whether trickle is affordable.

“Trickle has the potential to deliver the best water quality outcome in the area. Everyone’s sitting on the fence waiting to see if it works or not.” He says.

For more information, contact NQ Dry Tropics, 07 4724 3544
Once again horticulture growers across the Great Barrier Reef catchment have responded well to the uptake of improved practices via incentive funding from the Australian Government. At completion of round 2 incentives, for the bulk of the region, the regional natural resource management bodies involved had received approximately 160 applications seeking joint investment of $2,331,000.

Of this pool of applications 83 projects have been funded to the tune of $1.2 million, resulting in an average investment by participating growers of $1.60 for every dollar invested by the Australia Government. Projects have included

- Improved irrigation systems and monitoring units to reduce deep drainage / run-off and improve application and timing
- Implementation of advanced chemical application systems to reduce losses and target specific issues
- Improved fertiliser application systems to increase efficiency of application and plant uptake
- Inter-row management and sediment control to reduce soil loss and thus nutrient and chemical losses from the farming system
- GPS tracking systems, bed formers and mulching machines to improve soil health, reduce compaction and reduce the reliance on chemicals

As a direct result of Reef Rescue, 310 Growcom Farm Management Systems Water Quality modules have also been completed. The FMS process provides direction and support for growers’ decision making to ensure they are addressing areas of highest risk within their farming system. In many cases the risk assessment process gave growers new ideas for projects to improve water quality through better management practice changes.

Balancing productivity levels with environmental improvements comes at a huge cost. Changes to equipment and farming systems or building fencing along creeks to protect it from cattle are huge jobs that need to be considered carefully by land managers and implemented in a structured plan. It all takes time money and resources. These changes, when they are made, improve the water quality and flow of water to the Great Barrier Reef.

These land managers are making the changes to improve economic viability now and for future generations. They test and trial new and innovative ways to achieve better environmental outcomes which do not sacrifice productivity.

Financing these changes is not easy and invariably it comes down to the land manager to fund the cost of change. There are however, some respite for those wanting to adopt change.

Reef Catchments was recently inundated with applications for their Water Quality Improvement Grants, provided through the Australian Government’s Reef Rescue Program.

Reef Catchments land projects manager Phillip Trendell said successful participants in the region could receive up to 50 percent funding of the total costs for implementing eligible activities.

"Farmers and graziers give even more by helping out on field trips, bus tours and the development of case studies to promote Reef Rescue and their projects," Mr Trendell said.

In 2009, Reef Catchments distributed just over $5m to local land managers within the Mackay region. The aim is to at least double this amount by the end of 2010.

The Reef Rescue Water Quality Grants will continue to be a major component of incentive funding for the next three years while the program is still running.

For more information, contact Reef Catchments, 07 4968 4200
David and Glenyse Hampton own a grazing property on the Atherton Tablelands bordering the rainforest of the Wet Tropics World Heritage Area. Run-off from a highway was draining into their paddock resulting in large gully erosion. The gully tended to hold the moisture so the grass cover was always better than surrounding paddocks, making it very attractive to cattle camping there and grazing continually. The result was eroded areas causing major sediment and nutrient losses from the gully into the creek.

The Hamptons took the opportunity offered by the Reef Rescue program in 2009 to fence the gully and creek to restrict cattle access. They fenced half a kilometre to enclose 5 ha of land, filled the eroded parts and planted the gully with trees to form a shelter belt. The fencing effectively sub-divided the paddocks creating three grazing paddocks. Tanks were installed at the bottom of the gully between the paddocks as off-stream watering points for the cattle. Half-meter-square cardboard mats were trialled around the base of the trees which enabled them to be planted directly into the grassed gully area. These mats keep the soil moist and cool, which was critical to their survival, since the planting was done in the dry season. The mats also controlled weed growth, reducing the use of herbicides.

“I managed to get the cardboard mats for a low cost from the manufacturer who has stopped production”, said David.

On visiting the farm the following wet season more than 50% of the trees with cardboard mats had survived, despite being planted in the dry season. The planting was done in the dry season. The mats also controlled weed growth, reducing the use of herbicides.

“Being able to rotate cattle to other paddocks has enabled a longer rest period for the grass to recover in the gully and adjoining paddocks. Grazing pressure has been taken off the gully area preventing exposure of bare ground and thus sediment and nutrient run-off. The deposition of manure and nutrients is now spread over the whole paddock, avoiding a concentration in the gully which was running into the creek. The whole paddock area is already in better condition with a good legume-grass mix, in spite of the current dry conditions,” reports David.

“I highly recommend using cardboard mats as it avoids the need for clearing grass and exposing bare soil, as well as application of herbicides to kill grass. Other producers are already showing interest in this project and enquiring about how they can obtain or make mulch pads.”

David and Glenyse are planting more trees this wet season and have been able to increase their herd as a result of rotational grazing. For more information, contact Terrain NRM, 07 4095 3055

Cardboard mats
HELP STABILISE ERODED GULLIES

Cardboard mats planted up the gully on the Hampton’s property

Cape York
PRODUCERS SHARE COSTS OF IMPROVED PRACTICES

By Isha Segboer, Cape York Sustainable Futures

Much of the horticulture on Cape York Peninsula is situated within the Lakeland Downs district, an area of fertile soils which overlie a large basalt outcrop. Farmers in this area are eager to embrace sustainable farming practices, including those which are beneficial for water quality, and have been implementing many of these improvements of their own accord.

One of the large pieces of machinery funded through the last round of Reef Rescue was a spreader. The spreader, which helps farmers distribute soil conditioners thereby increasing organic matter and nutrient holding capacities, has been used across a number of properties in the region, including the one pictured. Good relations within the region have enabled growers to share in the co-investment for large pieces of machinery, substantially reducing their costs. Expressions of interest have been received for two more cross-farm projects during the 2009-10 round of funding, and growers are happy to share ideas and information about their practices.

The owner of Swiss Farms, Peter Inderbitzen, has been producing in the region for over 25 years. He has noticed improvements in water quality since introducing minimal and no-till practices to his farm.

“You used to see large clouds of dust like mini tornados during the drier months,” Peter said.

“These days, we only see that occurring on properties where people aren’t reducing their tillage. In the past, creeks would flow red with sediment during large downpours, and now you can see the improvement with much clearer water. Our controlled traffic practices have also greatly reduced the amount of runoff.”

For more information, contact Cape York Sustainable Futures, 07 4053 2836
Reef Rescue helps Calliope grazier keep up his dream

Cattleman Bill Oram described himself as a traditional grazier with a new direction when speaking at an information session held by Agforce, Fitzroy Basin Association (FBA) and Boyne Calliope Sub Region (BCSR) at Mt Larcom earlier this year. Mr Oram said he’s mixed cattle and tourism at his property Glassford Creek Station near Calliope in Central Queensland.

“I was always interested in working in the bush as a cattleman, but it wasn’t until I went to tourist resort Cooper Down at Banana that I discovered my niche in life: farm stays,” he said.

“A lot of us go through life wondering what our niche is and I knew straight away. I love teaching people how to ride horses and sharing my passion for the bush.”

Mr Oram and his wife Toni Capell started Glassford Creek Station’s farm-stay five years ago. They said the Australian Government’s Caring for our Country Reef Rescue initiative has helped them improve and protect their property’s greatest asset: the creek.

“We’ve got four kilometres of creek frontage and we’re going to fence the vast majority of it this year, thanks to the Reef Rescue grant through the Boyne Calliope Sub Region of the Fitzroy Basin Association,” Mr Oram said.

FBA has been working with landholders for more than 10 years to improve the productivity and sustainability of grazing and farming enterprises through voluntary on-ground projects that usually involve new infrastructure or the adoption of different management techniques.

“With the fencing, we’ll be able to control the paddocks along Glassford Creek,” Mr Oram said. “We have parthenium along the creek and the biggest enemy to it is grass competition, so by spelling the creek flats we’ll tackle the weed and improve pasture and run-off at the same time.”

BCSR extension officer Vicki Dart said at the information session in March that graziers in the Fitzroy Basin can apply for grants of $1250 per kilometre for land type fencing and $2500 per kilometre for riparian fencing, off stream waterpoints and more under the Reef Rescue initiative.

For more information, contact Agforce, 07 3238 6049

With the Reef Rescue program being a 5 year investment by the Australian Government, it is important to understand how effective the program is. One way to do this is to understand the level of adoption of certain relevant land management practices at the start of the program – using 2008-09 as the baseline – and to understand the level of adoption towards the end of the program.

The Australian Government has requested CANEGROWERS develop a Sugarcane Land Management Practices Baseline by considering industry data and other relevant information. The Australian Bureau of Statistics carried out a survey in 2009, however this is just one source of data and the survey did not consider all relevant sugarcane land management practices.

Some regional natural resource management organisations have also developed some baselines but more consistency is required for a total sugar industry picture.

CANEGROWERS is in the process of appointing large international consulting company GHD to assist with the development of the Reef Rescue Sugarcane Land Management Practices Baseline. GHD has considerable experience with the sugarcane industry and carried out the 1997 Environmental Audit for the sugarcane industry. They also have local presence in sugarcane regions and staff with experience in the sugar industry.

Intended outputs from the Baseline Study are:

2. Regional assessment of baseline (2008-09) level of adoption of ABCD for Nutrient, Chemical, Soil and Irrigation based on Industry ABCD framework, with possible reference to the results based on Regional ABCD frameworks.
4. Regional assessment of baseline (2008-09) level of adoption of certain relevant land management practices.

CANEGROWERS and GHD will be working with regional Reef Rescue sugar working groups and regional and district sugarcane organisations, as well as Queensland Farmers Federation and the Australian Government for this baseline study. A similar process may occur in two or three years time. Other rural organisations, Growcom and Agforce are developing land management practice baselines for their industries.

Anticipated completion date for this project is mid August 2010. The Reef Rescue GBR Wide Sugar Monitoring and Evaluation Committee will be the steering committee for this project, with Australian Government and Queensland Farmers Federation additions to this group. This group includes BSES, a representative from each of the four Regional Sugar Working Groups, Great Barrier Reef Marine Park Authority, Queensland Department of Primary Industries and CANEGROWERS.

For more information, contact CANEGROWERS, 07 3864 6444