

Sustainable Farming

**By Viv Forbes
September 2012**

A print-ready copy of "Sustainable Farming" can be downloaded from:
<http://carbon-sense.com/wp-content/uploads/2012/09/sustainable-farming.pdf>

"To be truly 'sustainable', a farm must recycle everything - otherwise it is depleting its soil minerals. Therefore it cannot sell any of its produce. This means it cannot buy items from the outside world, such as machinery, to make labour less arduous, and to produce more food. It is thus an impossible dream."

Bob Long

The man-made global warming crisis has gone cold, the "man-made extreme weather" scares are wearing thin, and people are waking up to the "tax war on carbon", so a new theme is needed for handing control of our lives, businesses and property to the world bureaucracy. The theme for the next green alarm is "sustainability" and a favourite target is "sustainable farming".

Unlike most armchair experts on sustainable farming, my early life was spent on an almost-sustainable farm. The memorable lessons we learned are described below.

We need to recognise some realities. Modern cities are not sustainable without farms, and modern farms are not sustainable without modern machinery, mineral fertilisers and affordable energy. City people should thank the lord for the machinery and cheap energy that produce the surplus food and all the trucks, road trains, refrigerated vans and milk tankers that bring it to their supermarkets every day. The last thing they should advocate is "sustainable farming".

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"Sustainability" is not a new idea – it has been discussed for decades by sensible people. It has great relevance to all properties held in common such as oceans, lakes, rivers, national parks and forests, the atmosphere and even government owned properties such as housing estates. In all such cases, the lack of an attentive owner dedicated to maintaining or increasing the "value" of the asset in his control can result in poaching, predation, pest infestation, pollution, squatting or destruction of flora and fauna in property owned in common. The "green" solution is to prepare a plan for long-term "sustainability" and enforce it with detailed bureaucratic rules to be enforced by inspectors.

To design such a plan needs the wisdom of Job and this is seldom found when the votes are counted in Parliament. We are not discussing that massive public policy aspect of sustainability here. We are discussing the hijacking of that idea by zealots trying to enforce their sometimes perverse and misguided philosophies on private farmland at other people's expense.

Let's look at some realities of "sustainable farming".

Farmers have been managing their eco-systems carefully for generations. Most love their properties and their livestock, and those who do not manage their land, soil and biological resources properly will see their production and profits fall, their property values decrease, and their debts increase. The land is likely to pass into the hands of better land managers.

In the same way that global warming zealots blame man's industry for every weather event, they have twisted the word "sustainable" to mean whatever suits their current crusade. In farming debates it may mean "organic", "free range", "no-till" or "chemical free" production methods. It may also mean maintaining a nature reserve, protecting endangered species, using only native plants and animals, or even "carbon farming" (what other type of farming is there?).

But if words still have meaning for discussions among sensible people, surely a "sustainable" farm must operate a closed-loop process where all energy, carbon, nitrogen, water and minerals used are "renewable" ie there are no external inputs, no special subsidies, and no progressive reduction in the productive capacity of the land. There must be no "waste" on a sustainable farm, and also no loss of soil minerals to erosion, sewers, cemeteries, garbage dumps or through the farm gate when produce is sold.

I was reared on a farm that was almost "sustainable". It illustrates the harsh realities of another "Green" dream.

Our farm was about 300 acres of cultivated land and native pastures at Wheatvale on the Darling Downs in Queensland, Australia. During the 1940's and 50's, the farm was worked by my father using horse power with added hard labour from my mother, older sister and me (but I was just a small inquisitive hungry passenger for much of this time). We occasionally had casual helpers who were happy to work in return for bed, food and a bit of pocket money. One was a returned soldier suffering from malaria. Another was a prison farm inmate on probation (and he had no "Blue Card"). This was all the labour the farm could afford.

We grew native grasses, lucerne, some corn, oats, sorghum and wheat, milked a herd of dairy cows, kept poultry and raised a few pigs. There was a small orchard beside the house with citrus fruit, stone fruits, passionfruit and grapes. We produced most of our own milk, cream, butter, chickens, eggs, pork, corn, some vegetables, jams and fruit in season and occasional fish and yabbies caught in the river (today much of that is probably subject to a fringe benefits tax if provided to an employee).

The farm supported our family plus about 40 milking cows, a flock of hens, about 12 pigs, eight draft horses, two stock horses, two ponies, a cattle dog, two neutered cats, weevils, fruit flies, grass-hoppers, army worms and the occasional mouse plague. Apart from a bit of grain purchased at times for poultry, all the animal feed was produced on the farm. Thus we, our animals, and our resident and itinerant pests consumed most of what the farm produced.

To provide the minimal cash needs of those days we sold milk, bobby calves, old cows, the occasional pigs and some cereals. Our milk was picked up by the milk-truck and sent to a cheese factory in several metal milk cans with our name on them. We got the whey back from the cheese factory in the empty cans. It was re-cycled to feed calves and pigs. We bought bran from the flour mill - this was the reject from wheat after making white flour. We fed bran to pigs and poultry, thus recycling part of the wheat produced by our farm. Dogs, poultry and pigs consumed all household food scraps.

We had no piped water – just the Condamine River, one small dam, one windmill on a well and two water tanks on the house. There was no electricity or telephone. Lighting was from kerosene lamps and candles at bed time. There was an open fire in the lounge room. It burned blocks of wood from old posts or lumps of coal scavenged from along the railway line that ran through our farm. The iron stove in the kitchen used fallen wood gathered from the back paddock. Hot water came from a fountain (about 3 litres capacity) attached to the side of the wood-burning stove. We all bathed about once a week using one or two kettles of hot water. We all used the same bath water, Dad last. That water then went onto the garden. Clothes were washed in a copper boiler in the back yard, rinsed and wrung by hand, and dried with wind and solar power on a clothes line.

We had a Coolgardie evaporative cooler with bag sides sitting outside in the shade of the veranda. This was used to store milk, cream, butter and eggs. We used to preserve eggs with waterglass when the hens were productive to use later when they were moulting. Salt was used to preserve meats. Cold water came from a waterbag hanging under the veranda. Our medicine cabinet contained castor oil, Epsom salts, borax, iodine, Condy's crystals and bandages.

The toilet was a dunny up behind the shed under a pepperina tree. You went down the stairs, out the yard gate, up past the shed and into the "Little House" which was all set up with newspaper wipers, a bucket of ashes to keep the blow-flies off the refuse and some reading matter (usually "*The Woman's Weekly*"). About once a fortnight, Dad took the drum out from under the wooden seat, dug a hole in the paddock with a crowbar and shovel, and buried the excrement – all very sustainable. We used no insecticide and one day Dad got bitten on a very private part by a red-back spider – they loved the dark places under the seat.

Our Dunny fell down before our family discovered cameras but this is a more Modern Dunny:



Photo credit: <http://jobryantnz.wordpress.com/2011/10/19/the-d-of-aussie-slang/>

Cows were milked by hand, ploughing and planting was done with a team of draft horses, and cattle were moved on foot or horseback assisted by "Digger", our blue-heeler cattle dog.



Ploughing using Hay-burners

Photo Credit: (c) Kapai / www.fotosearch.com

Mum cultivated the orchard with a set of harrows pulled by a draft horse. When the weeds got too hard for her, Dad took over, walking behind a single furrow plough pulled by two draft horses. Corn was picked by hand and the cobs thrown into a dray pulled by the quietest draft horse. The cobs were then shovelled into a shed where we hoped to thresh the grain off the cobs before the mice ate it all. Lucerne was cut using a horse-drawn mower and rake. Haymaking was a big family affair when everyone got a job with a pitchfork – mine had a special short handle. I still have it.



Making Bio-fuel for Hay Burners

Photo credit: <http://thekinnickproject.blogspot.com.au/2012/07/75-years-ago-eileens-diary-july-9-1937.html>

So our farm was very "green" and almost "sustainable", but not quite. We did sell a little in order to buy tools, food, clothes or luxuries, and to pay rates to the council.

Minimal food was bought with cash – bread, flour, cheese, sugar, jam, treacle, honey, rolled oats, tea, salt, pepper, dried fruits, some vegies, corn meat, bacon, vinegar, bi-carb, Holbrooks sauce and hot-cross buns at Easter. In fact, during and after the war years, food was rationed – I think even farmers had to surrender ration coupons in order to consume their own food – much like the coming regime of carbon ration permits – a pretend shortage amidst plenty. (But Big Nanny could not watch everywhere, especially at night, and quite a few roosters and pigs suffered sudden unexplained deaths.)

Almost all of the primary energy consumed on our farm was solar energy plus a little of its offspring, wind power. We bought a bit of kerosene for our lights, a bit of petrol for our old Ford utility, some oil and grease for the plough and a few bars of "Sunlight" soap for washing clothes and bathing.

However, our "almost sustainable" farm produced very little surplus produce for selling in town.

Farmers use plants to harvest natural resources – solar energy, carbon dioxide, water and nitrogen from the atmosphere plus minerals from the soil. Thus the primary product of our farm (and most others) was plants – pasture, grain, vegetables and fruit. On our "almost sustainable" farm we and our animals (horses, cattle, poultry and pigs) ate most of the plant material produced by the farm. Thus most of our soil minerals were returned to the soil via the manure from our animals, from the bodies and bones of any animals that died, and from the recycled material from the dunny under the pepperina tree.

However, we could not have gone on forever selling even small quantities of milk, cows and calves without putting minerals back into the top-soil – every cow and gallon of milk sold carries with it calcium, magnesium, phosphorus and other minerals contained in the milk, bones and meat. This explains the gradual reduction in the mineral content of unfertilised farmed soil. A truly "sustainable" farm thus requires that all animal and plant material is retained on the farm, composted and absorbed back into the soil via humus, earth-worms or other tiny soil critters, ready for reuse by the next generation of plants.

We could possibly have replenished minerals in the surface soil for a while by deep ripping to bring up new decomposed rock minerals, if we had possessed a dozer or a powerful tractor and ripper, but the draft horses were just not up to that. A scattering of deep rooted trees and "weeds" can also help for a while. Otherwise it is necessary to buy mineral fertilisers such as lime, dolomite, gypsum, phosphate and rock dust to replenish soil minerals such as calcium, magnesium, phosphorus and many trace elements including sulphur, copper, cobalt, selenium and iodine.

So we get to a conundrum. According to green definitions, a "sustainable" farm cannot use imported minerals. But a farm that sells plants and animals to a distant market cannot sustain the mineral content of its soils. Hence a farm that sells its produce off the farm is not sustainable - it is extracting minerals as effectively as any mine and to retain productivity, these soil minerals must be replaced.

(One of my editors points out that farming in ancient Egypt was almost "sustainable". Every year the flooding of the Nile would spread water and mineral fertilisers over the flood plains. The crops growing on these flood plains were then harvested and the grains went to Cairo and even Rome to feed the soldiers and cities. Next year the Nile replenished what had been exported. This natural sustainability can only last until the mountains are eroded down by the Nile, or until someone builds an Aswan Dam which catches most of the water and all of the silt. Farming then becomes dependent on imported fertilisers and is no longer "sustainable".)

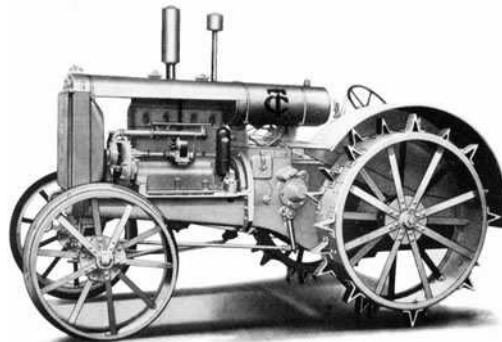
My early family experience of sustainable farming leads to the conclusion that the "sustainable" farm so lauded by eco-extremists is an unsustainable dream unless we let the cities starve and we all go back to the labour-intensive self-sufficient peasant farming of my childhood.

Those promoting this version of "sustainable farming" are thus on a par with the Pol Pot generation of Cambodia who emptied the cities, sending city-siders to starve in impoverished communes in the country-side. Maybe that is the plan of today's global elite?

Luckily our family was saved from a life of sustained hard labour when our farm was touched by the magic of modern machinery, powered by cheap energy from coal and oil.

I remember our first diesel-powered milking machine being installed. Suddenly Mum no longer needed to labour in the bails milking cows – Dad and I could do it (and I did not do much).

Then we bought the little yellow kerosene-powered steel-tyred Twin City tractor (most of our neighbours got a Fordson). This allowed us to pension off all the draft horses, and replace them with more cows.



The Marvellous Twin City Tractor
– it replaced eight hungry draft horses and ran on the smell of kerosene.
Photo credit: Twin City Tractors

Draft horses eat an incredible amount of hay/pasture/grain. They are huge animals and need a lot of food. And they eat whether they are working or not. The phrase “eats like a horse” has a sound basis. Ruminants like cows, sheep and goats have dual stomachs and they re-chew their food (chewing the cud) and thus manage to extract most of the goodness from it. Horses have a single stomach and do not “chew the cud” – their food goes straight through and less nutrition is extracted from it. So they need a big quantity of feed and spend much of their waking hours eating, or downloading waste products. So our little yellow tractor saved a large amount of pasture, hay and grain for more efficient use by cows and pigs.

With the ever-hungry draft horses gone, we could run more cows and sell more milk. But this windfall profit was not frittered on luxuries like ice-cream - we invested in our own 32 volt electricity plant for lighting. There were 16 large 2 volt lead-acid batteries on the veranda charged by a small generator attached to the diesel engine driving the milking machine. What magic that was - light at the flick of a switch, so clean and bright without a flicker, no smoke in the house and an end to the worry of candles setting fire to curtains or mosquito nets. There was just enough power for a few bare light bulbs and Mum's electric iron. We then invested in another luxury - a kerosene fridge, which allowed Mum to make ice cream for Sunday lunch.

Today, many farms are big mechanised food factories. They use tractors instead of horses, and mechanised milking barns instead of muscles and a bucket. Animals do not run free but are fed in huge feedlots. As a result of this continual mechanisation, there is now far more surplus food produced per acre, and this is what has supported the massive growth of population in the cities.

Most of today's farms are totally dependent on carbon fuels for tractors, trucks, bikes, milking machines, refrigerators, mechanical harvesters and water pumping. None of them would be classed as "sustainable" by green warriors – all need external contributions. If these large mechanised food factories returned to the "almost sustainable" model of my childhood, the cities would starve - no big cities would be sustainable.

Use of the term “sustainable development” by the UN and its agencies thus has sinister overtones in terms of population control, deprivation of human freedoms, destruction of property rights and suppression of the spirit of discovery and innovation by the dead hand of the nanny state. All of this will reduce our ability to produce food.

Indeed we should look very carefully at the real agendas of those sprouting "sustainable farming".

Viv Forbes

September 2012

Viv Forbes is self-employed. He has a degree in applied science and has been associated with the primary industries of Northern Australia all of his life - from childhood on a small dairy farm, to running a few cows and ponies on a hobby farm, to supervising a large beef grazing company. He and his wife now own and live on a small grazing property which breeds cattle and sheep. He has also had extensive experience in that other great primary industry so vital to Australians - mining, and is currently a non-executive director of a small coal exploration company. Most of his time and energy is now spent farming.

“Carbon Sense” is a newsletter produced by the Carbon Sense Coalition, an Australian based organisation which opposes waste of resources, opposes pollution, and promotes the rational and sustainable use of carbon energy and carbon food.

Please spread “Carbon Sense” around.

For more information visit our web site at www.carbon-sense.com

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