



Garden of Earthy Treasures, Dimboola

Our Family

G'day from our joint- the 'Garden of Earthy Treasures', near Dimboola in the Wimmera, northwest Victoria. We are in the process of creating a **dryland permaculture family farm** under **Xeriscaping** principles – for **minimum water use**- which has led to a great use of **aquaponics** and tubs, *eg in the photo below right and on following pages.*

Our **family of three** –two adults and a teenage son- live here now, after having been a family of nine. The '**men**' in this family **do most of the work** in the garden: keeping the veggies going, the fruit tree orchard pruned, weeded and mown. We're expecting a good crop of fruit, especially cherries by Christmas! We manage the property ourselves with minimal input by other family members, although the Grandparents do like to come out and potter around occasionally.

I spend my time fleshing out the **grand plan** while also running **workshops** in the area on soil health, worm farming and composting, garden design and planning, seed propagating and transplanting and pretty much anything to do with backyard gardening (family farming - rural or urban).

My **partner and I** also help to **facilitate community garden communities** too and guide them thru the process of planning, designing and funding them as well as practical works hopping for new gardeners. This provides some **off-farm income**.

My **wife** is completing **post-grad study** and planning the relaxing part of the farm.

Our youngest **son** is in his final years at the local **school**, within a half hours drive/bus trip.



Our Farm

Our rural family farm, 'the Garden of Earthy Treasures' is **9 ha in size** currently (*shown in photo attached- look for its parts as you read through*). It is **small**, especially **by Wimmera standards**, as its intention is to make it **very intensive** and be able to **live sustainably off of it**, by adopting 'Xericulture' practises – a **cross of xeriscaping and permaculture** – see http://eartheasy.com/grow_xeriscape.htm)

You can follow our progress, challenges, tips and successes at <http://paulsaquaponics.com/> . So far, we are partly in production. No produce is sold yet but the plan is to produce much more in the commercial veggie beds for sale at the farm gate and farmers markets. We have another **11 ha** to expand into, that is currently **rented out**,

with the share farmer producing **broad-acre crops** and **additional income** for us.

We are located on a **slight rise**, *as you can see in the photo above right*. So when torrential rains do very rarely fall, they flow away from the buildings.

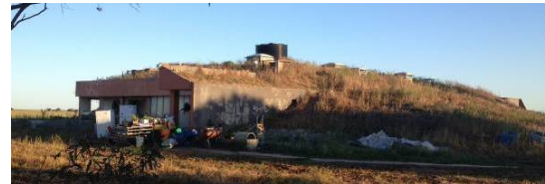
Our **soils are Wimmera Loam** which have good water holding capacity without being waterlogged, but they are old, poor soils and need inputs for farming food. Our use of **aquaponics** does not use any soils and only **takes up space** on the landscape, *as you can see in their cubic containers in the photo on the first page, to the right, and on the next page*.

We have an **arid dry land Mediterranean climate**, with some frosts. Our aspect is open to **summer's hot dry killer north and west winds**. So, we have made a **bush food plantation** (*eg photo right*) to protect us from these - when it grows taller. There is a lot of **Buloke** (*trees on left*), **Acacia bushes** and **grasses**. As the **land was cleared** long ago, our **plantings** are based on the Wimmera Catchment Management Authority's **Wimmera Grassland Savannah** findings; **Quandongs** (Wild Peach) (*central green tree in the photo above*), **Bush Tomato** and **Muntries** (Native Cranberries) between rows. *These bottom photos show Quandongs in flower, fruit and berries.*



We use the 9 acres to the east of the road in to the house, *seen on the photo above*. There are **many parts to our farm**:

- a **house garden**, which you can follow at <http://paulsaquaponics.com/2014/10/21/la-vergues-pallet-garden-is-filled-and-growing/> and at <http://paulsaquaponics.com/2014/06/21/the-implementation-of-planting-by-the-moon/> You can see *in this photo right* that it is a **raised bed** garden, as another method to overcome the poor soils and arid conditions.
- **Terradome**, *in the photo right*, is one of only three in the Wimmera. We use it for an **aquaculture breeding house**. *What benefits does a building like this have?* Its temperature doesn't get so hot in summer or cold in winter, maintaining a constant 18 to 25 C by opening or closing the roof vents.
- In the **aquaponics** area, we use different **containers** – *like the baths and barrels in the 3 photos above right-* and **growbeds**. Over the years, we've experimented with growing **mediums** like Bluestone gravel, red scoria (*photo right*), vermiculite/perlite mix, hydroton pebbles and some mixes of them all in differing quantities allowing for different crops to be grown. Now we know that, lettuce can be grown in less than 5 cm of medium, while corn needs something stronger to root into like gravel or scoria.
- **chooks shed /pen**, built from recycled materials
- 48 bed **commercial veggie plot**
- **Natives area** - with **established** trees like Mallees (*photo p 5*) and Bulokes, and **new plantings** of bush foods in swales (*the photo right shows one with acacia bushes and Buloke trees and grasses*). **Swales** are ripped and raised lines, following the contour of the land to retain any rainfall and minimise soil drift. **Bush foods** require correct tending to produce prolific flowers and fruit. They are 3 to 5 years away from sufficient produce for a 'real' harvest. **Grasses** help protect our soils from summer's heat and dry.



Our produce - 'Feeding the world' here is 'Feeding ourselves'

All we grow is eaten by us. Leftovers or excess are given to the chooks and ducks. It is our intention to produce all our own fish, meat, veggies and fruit, with freezing and preserving of any excess. We currently have **food from the garden, terradome-aquaculture and aquaponics** parts of the Garden.

The **Terradome** has **aquaculture** breeding for:

- **Catfish**, *Tandanus tandanus*
- **Silver Perch**, *Bidyanus bidyanus* (photo last page)
- **Yabbies**, *Cherax destructor* (photo right).

Our current **poultry** stock comprises:

- **hens** and chickens (photo last page)
- **Muscovy ducks** (shown in the photo right)

Sheep, goats and maybe a cow are planned for in the future. We also have a few dogs and a cat.

We concentrate on **heirloom veggies** and mainly **heritage fruit trees** with a rotation plan of five years. There are no hybrids on the property. Some of our current crops include:

- **Vegetables :**

beetroot, carrot, cucumber, (3 varieties) , eggplant, zucchini (Romanesco), lettuce (Iceberg - *in the photo right, it has the crinkly leaves in two colours*), onion (Spring and Walking), potato, pumpkin (Turks Turban), and silverbeet.

- **Fruits :**

trees, 29, with watermelon below, strawberry, (13 varieties) (*in the photo right, it has small, folded, serated-edge leaves*), tomato (9 varieties), cherries, Quandong (photo p 2), Muntries and Bush Tomato

- **Herbs :**

numerous, and all heirloom varieties.

We have a 5% seed collection policy for each crop to retain current seed stock and add to our **seed library**

(see https://paulsaquaponics.files.wordpress.com/2014/10/img_1841.jpg)



Sustainability - 'Caring for the Earth'

Soils

Worm farms and **compost heaps** - of green manures, worm farm tea, nettle and comfrey tea - add complexity to some tired broad acre soils in various locations on the farm. *In the photo right*, our worm farms are in the normal tubs. We have **Red Wiggler** and **Indian Blue compost worms**. Worms are in the black Bokashi bins from the kitchen. When full, this bin goes to the dome to finish off and an empty bin with worms comes back to the kitchen.



Water

We have **dripper systems** and **timed watering applications** on vegetable beds, fruit trees, growing mulches and compost crops. **All water goes through the aquaponics systems to remove excess nutrients.**



It is returned to the grow beds. Our various **ponics systems** (see triple photos on page 3) **all work on the basic siphon and cycle method** (photos above show the siphon's parts).

This is **how it works**. A timer allows pumping for 15 minutes an hour. During this time the grow beds fill, siphon drains and fills again. While filling and draining, **oxygen** is introduced to the water. The **fish waste** and **excess fish feed** is introduced to the grow beds, for the **worms** to do their good deeds. The grow beds are inoculated with **nitrifying bacteria** that change **ammonia** into **nitrite** firstly, then into **nitrate**. This is taken up by the **plants** in the bed. Water is then returned to the **fish and yabbies** below. It is a **closed system** with the addition of some **chelated iron** and **liquid sea weed feed** very occasionally.

Nature (plants and creatures of all sizes)

The natives

Trees filter our air. We have kept the trees that were here already, mainly Mallees planted a couple of decades ago, and Bulokes, and added more natives. The trees' main challenge is **dry times**. *In photos on pages 2 and 3*, the mature **Bulokes** have **needle-like leaves** for this. *In the photo right*, the **Mallees**, in the foreground, develop **several trunks** instead.



We protect plantings with covers (*in photo right*).

The more we grow in the line of **natives** in our plantings and bush food area, the more it **attracts native birds, bugs and beasties**. They assist in **keeping down pests** such as earwigs and aphids and add great character to the **morning cacophony**.

Being **wildlife carers**, we take in injured and abused creatures (eg Heckle the crow, *photo right*), while watching new birds (e.g. Bush Stone Curlews) and other creatures (e.g. Drop-tail Skinks) making our Garden home with each addition of native plantings.



The old varieties

We are focussed on heirloom vegetables and heritage fruit trees. To us at the Garden of Earthy Treasures, **keeping heirloom veggies and heritage fruit trees** is important because it is our belief that GMO and hybrid plants restrict the **diversity that nature provides and provides for good reason**. **Keeping the art of gardening alive** with plant diversity and open pollination practices means **future generations** will be able to better provide for themselves ensuring food security and community health. To be a **provider for others** for future heirloom and heritage sales, we are in the process of building in economies of scale.

Knowing our Food's Sources and Inputs

All that with the added bonus of knowing where our food comes from and what has been applied to it during its growth and harvest, allows us to be **confident in our food security and its chemical inputs**,



like the Silver Perch and our first chickens in the photos above, and, in the middle photo on page 3, the carrots, lettuce and mini-cabbages in the blue barrelponics containers.

We don't have the momentum yet to know what impact we are or might be having yet on **our vision**, which is **to be as self sustainable as possible, providing our own food and fruit and dealing with waste in such a way as to not to add to our footprint**. Eventually we would like to be able to take on others waste putting our garden into a positive position.



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For more information about family farming and the 2014 IY Family Farming go to:

<http://familyfarms.enviroed4all.com.au/family-farm-snapshots/> for more in this series of snapshots

<http://www.fao.org/family-farming-2014/> <http://www.familyfarmingcampaign.net> for the official IYFF sites