

Lessons from a peri- urban certified organic, permaculture farm

‘Living on the Edge’

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IPC UK 2015



Overview

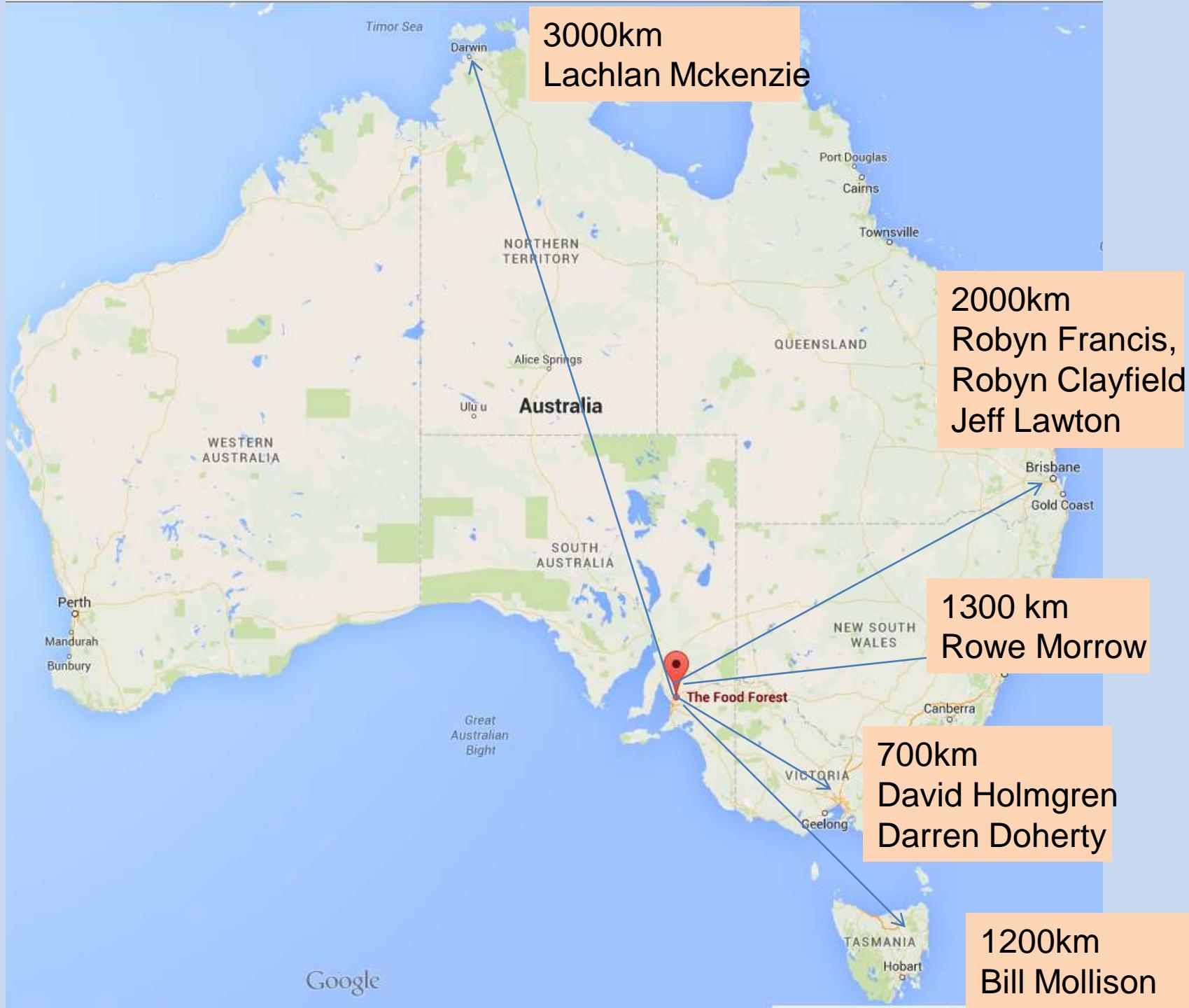
- Where is The Food Forest
- Climate
- Who are we
- What do we do
- Observations
- Throw in Climate Change
- Observe & adapt



Size: Europe - Australia



From: www.britizinoz.com



Climate Adelaide, South Australia

Latitude 34.51° S

Climate zone:

- Hot dry summers- Day temp: ~23-44°C
- Mild winters- Day temp: ~12-17°C.
- Annual rainfall: ~400mm mostly April – Sept
- Annual evaporation: >1800mm
- Rain days over 1mm: ~50 days/year

Water in South Australia:

- Driest state
- Driest inhabited continent
- Evaporation rate >1.8m per year





The Food Forest

- 20 hectares at Gawler
- 150 food varieties grown with deficit irrigation – fruit, nuts, vegetables as well as poultry, cereals & bees
- Processing equipment for value-adding & to retain control of carbon and nutrient-rich 'waste' on the property.
- Learning and work experience via the WWOOF (willing workers on organic farms) model
- Education enterprise which offers PDCs, short courses and tours.
- Employs 5 staff

Us!





Tom and Nikki in early 1990



Tom and Nikki 2005

Employees and WWOOF-ers



Our Mission:

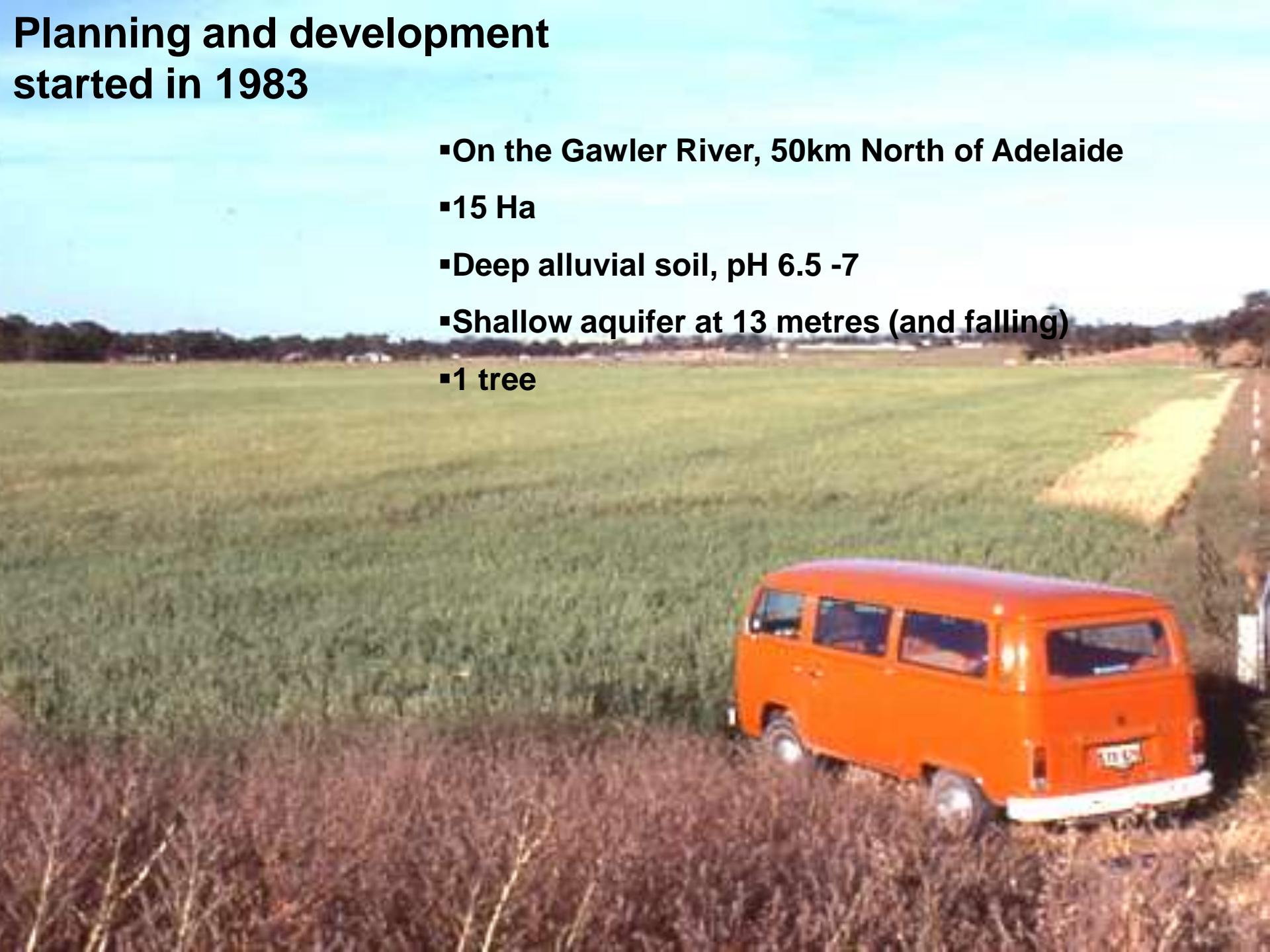
To demonstrate that land can be managed in an environmentally sustainable way, producing healthy food and a healthy income.

To share information and skills for land management, self reliance, conservation and food production with other people.

To be a rich and beautiful place to live, to work and to raise children with balance, wisdom and skills.

Planning and development started in 1983

- On the Gawler River, 50km North of Adelaide
- 15 Ha
- Deep alluvial soil, pH 6.5 -7
- Shallow aquifer at 13 metres (and falling)
- 1 tree



Some 20 years later.....



LocationCombi

And now..urban sprawl at our doorstep



Farmers need to be good neighbours

Perception

- Scrutiny
- Fear
- Sprays
- Smells
- Lack of knowledge
- Preconceived ideas

And urbanites need to eat good food

- Protection of farm land within cities
- Protection of peri-urban farm land
- Character bills (maintaining rural areas)
- ‘Right to farm legislation’
- Nutrient cycling
- Access to waste water from cities

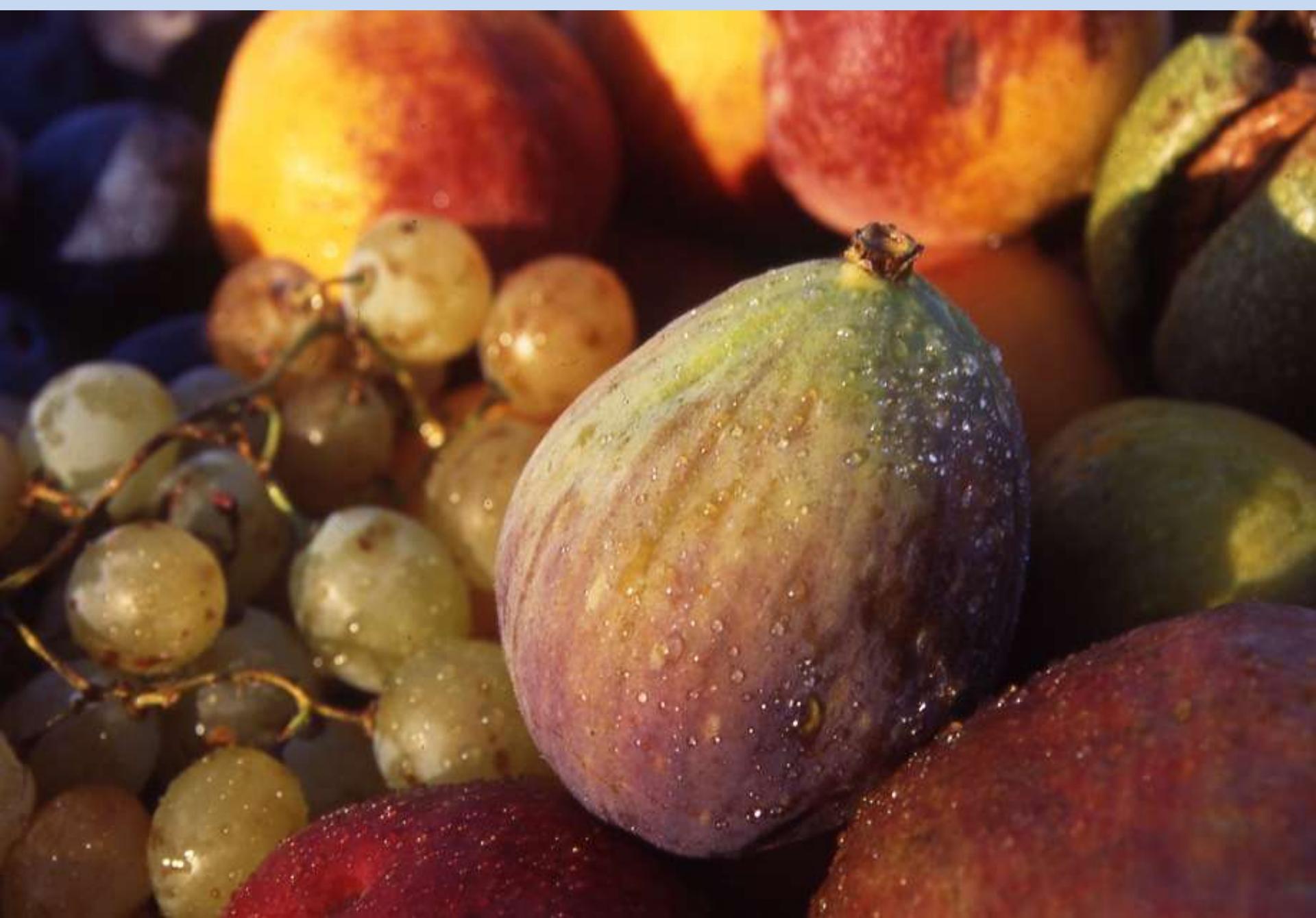
We grow ~150 crops



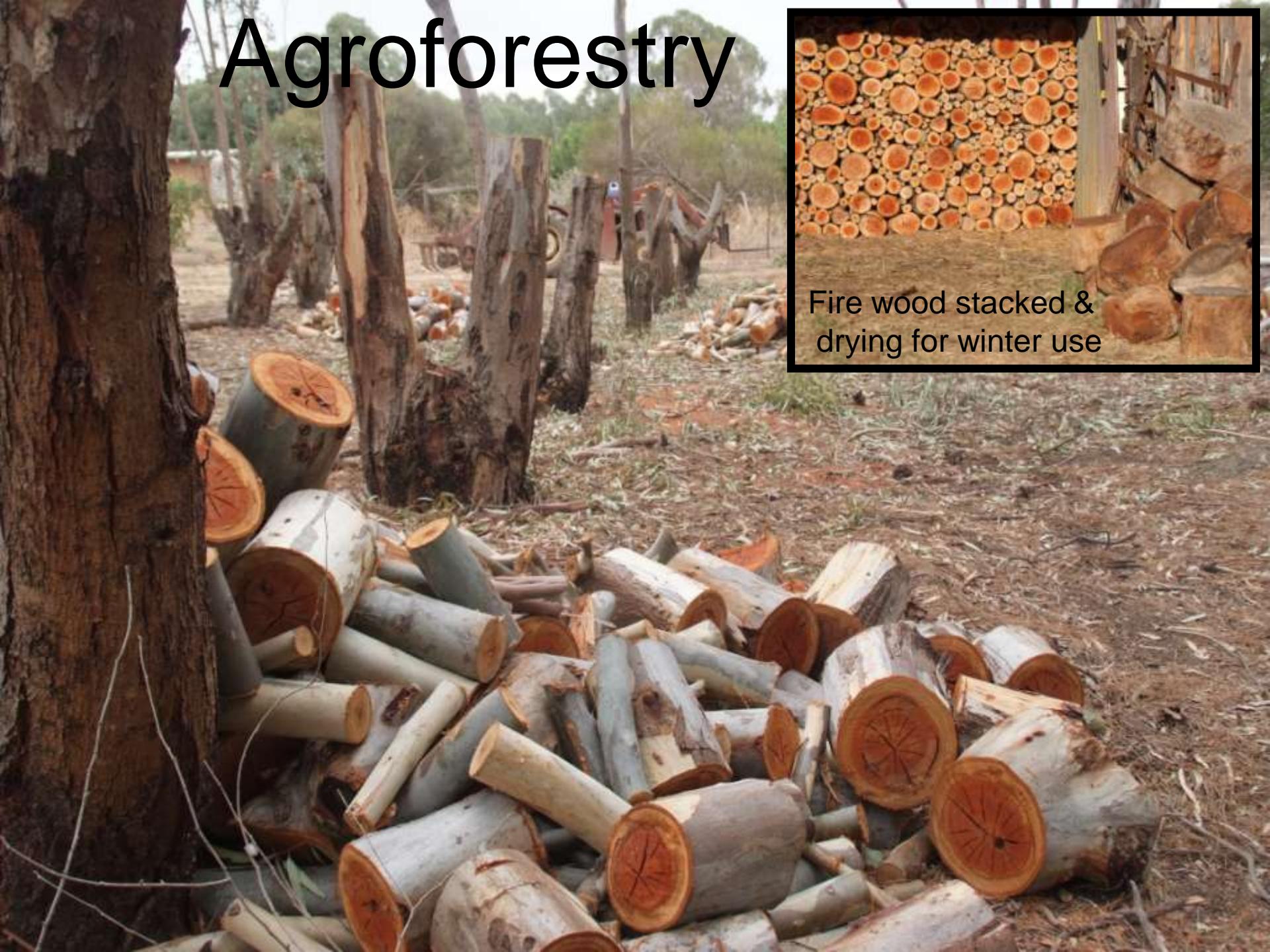
Including vegetables



Assorted Mediterranean fruit- delicious!



Agroforestry



Fire wood stacked & drying for winter use

Integrating Poultry



Biodiversity & habitat



Specialise in Pistachios



Harvest and processing

- Coolroom pic





Processing on site

Dehydrator

Locally designed & made

Efficient

Clean heat

Field day for small growers- introducing small scale machinery



Sell at Adelaide Farmers market 50 kms





We eat well.....



Value adding

‘Seconds’

Making extra use of machinery

Gourmet product

High Value



Organic wine and liqueur production



Improved soils

Organic carbon 8.2%



We make compost from farm waste



We buy compost made from Urban green and food waste for fertilising orchards and cropping land





Building with straw



Tiny, strawbale, affordable, DIY
& meets regulations



Solar energy:

Photovoltaic panels (left) for power production, 7kW

Export excess power to the grid.

Solar panels for hot water (right).





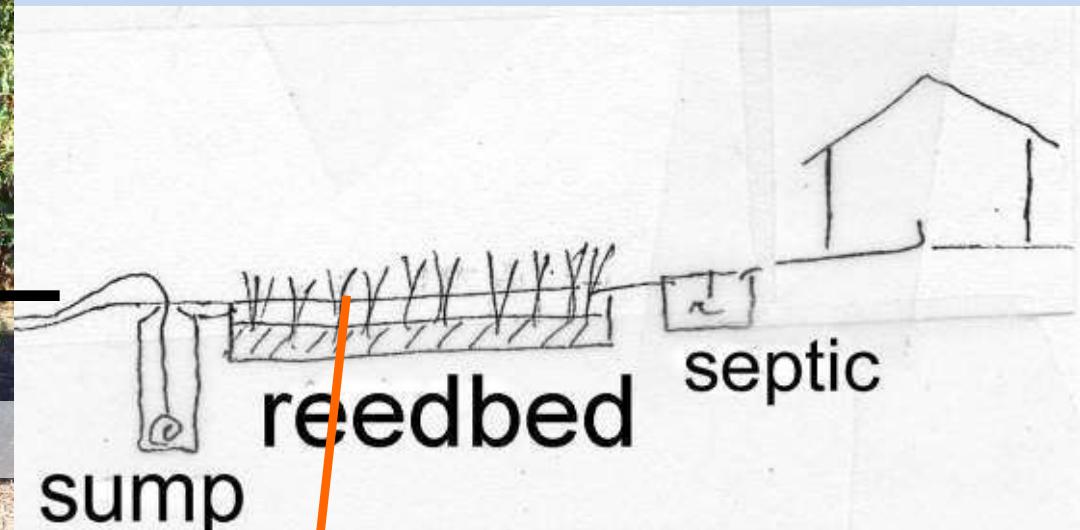
Water catchment

Roofs, Rainwater tanks
& Reticulation

– part of the plan!



Recycling wastewater at home – a natural system



The average family's domestic reedbed enables the growing 10-20 fruit trees on recycled water



Drip irrigation delivers water to the root zone



Irrigation under mulch:

- Saves water
- Stops weed growth
- Keeps root zone cool
- Conditions the soil

Temperatures, gardens & mulch

31 degrees in the shade

Temp of bare
ground in sun: 60.6



Temp under
mulch: 23



Education



Our courses are experiences that bring together good people and good food



Experience: It's cooler under the mulch!



By almost 40 degrees!



Burundian refugees learning about vegetables growing strategies in SA



Communicating with politicians....



Bench marking & testing against 'main stream'



2013 Barossa Regional Food Award
The Food Forest took the honours for the Barossa ceremony at Chateau Tanunda. The pint-size against national icons such as Maggie Beer and pistachios, the... [more »](#)



2011 Commonwealth food innovation award
The Food Forest wins Commonwealth food innovation award
The Food Forest has researched small scale nut production throughout the Mediterranean and with the help of the Food Forest installed a working model for nut growers and processors.



2007 SA Premiers Food Awards
Winner: Environmental SustainabilityFood Forest
The Food Forest has again been judged South Australia's best business in the food sector. What is it about the Food Forest that has bowled-over the Premiers judging panels in the last three years?

2006 National Banksia Environmental Awards
Finalist: Education category.
The Banksia Environmental Awards are recognising environmental awards. The awards acknowledge excellence in projects that contribute to the environment and a sustainable future.
The Food Forest is a finalist in the 'Education' category.

Now add global warming....

- Hotter summers
- Extreme temperatures
- Warmer winters
- Less rain
- Saline water
- Erratic weather patterns
- Droughts
- Floods
- And much more.....so what kind of planning?

2013-14 Summer the second hottest on record

- Hottest February day – 44.7 °C (112.5 °F) on 2 February 2014.
- Record number of days exceeding 40 °C (104 °F) during the summer months– 13 days.
- Record number of consecutive days exceeding 42 °C (108 °F) – 5days .

Fires Jan 2015

11,500ha in the Adelaide Hills burnt in first 30hrs

From TFF, 3 Jan 5.30 pm



From TFF, that night



Net working with local fire service- community strategies



Install more rainwater tanks...



Warmer winters disrupt flowering patterns...
Fully formed nuts (flowered in Oct) and flowers in Feb



Adaptation: Low chill varieties



Pomegranates

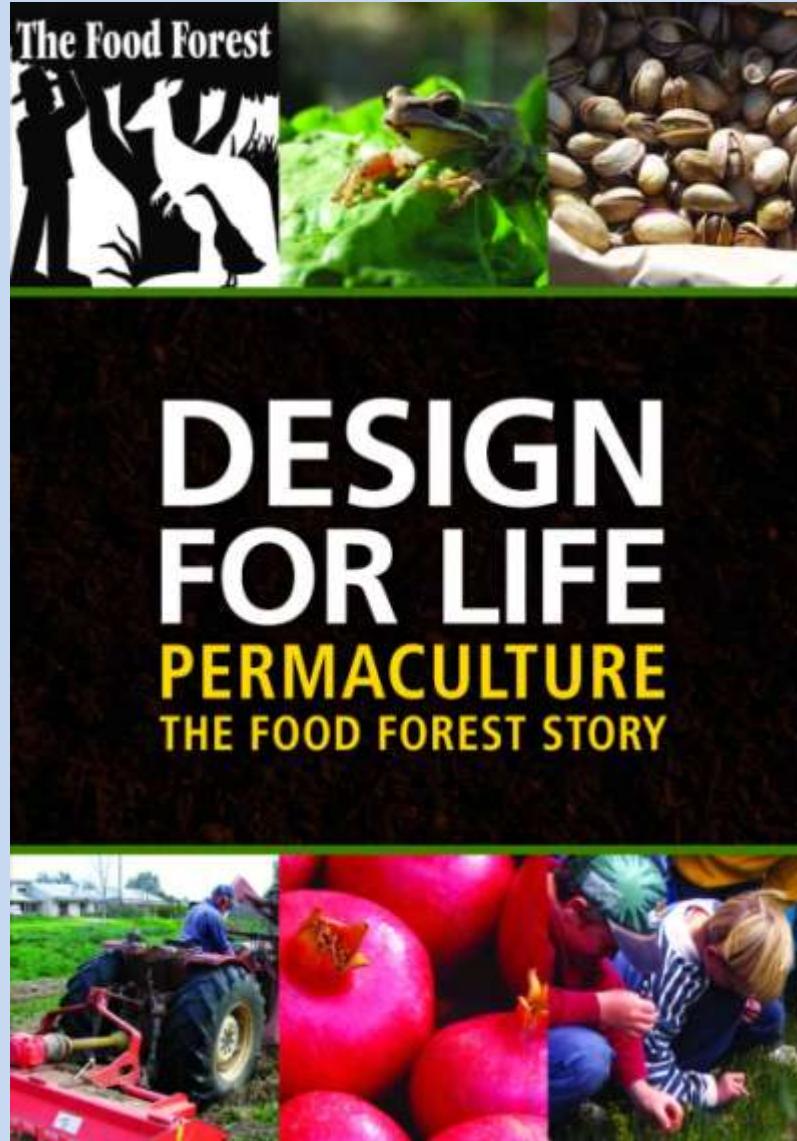


Empower the next generation to farm



www.foodforest.com.au

Design for Life DVD







Observation



Food



**Our business is also our home
& a place for kids to grow up**



Cash



Risk taking



Tom in 1987



Tom and Nikki 2005

Integration of poultry in orchards



Adaptation

- New species and varieties adapted to warmer, drier, saltier conditions
- Environmentally modified growing using shade species, shade structures

Soil prep....
The team:
Tractor & chooks

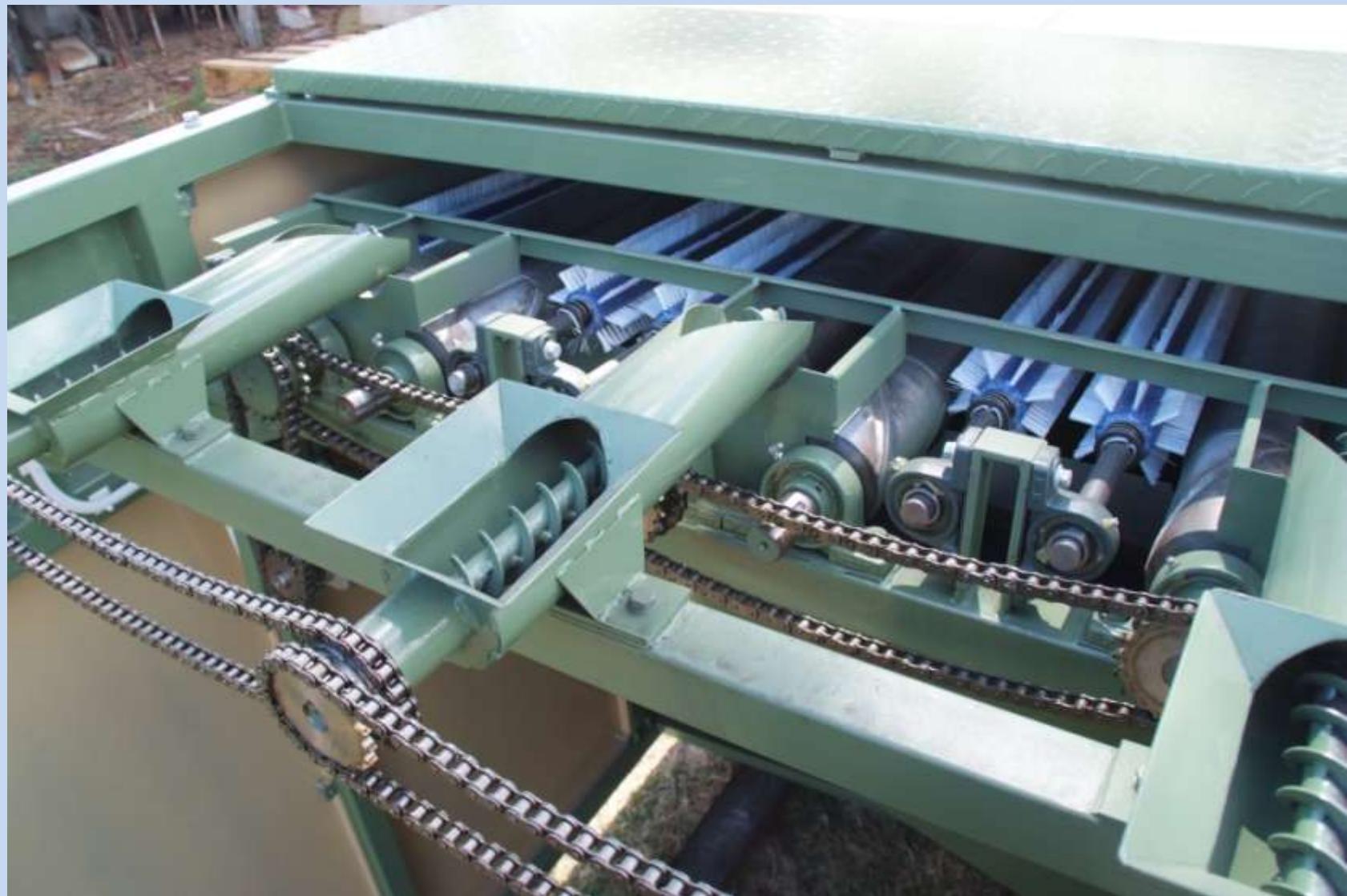


Ego ...Singing about permaculutre....

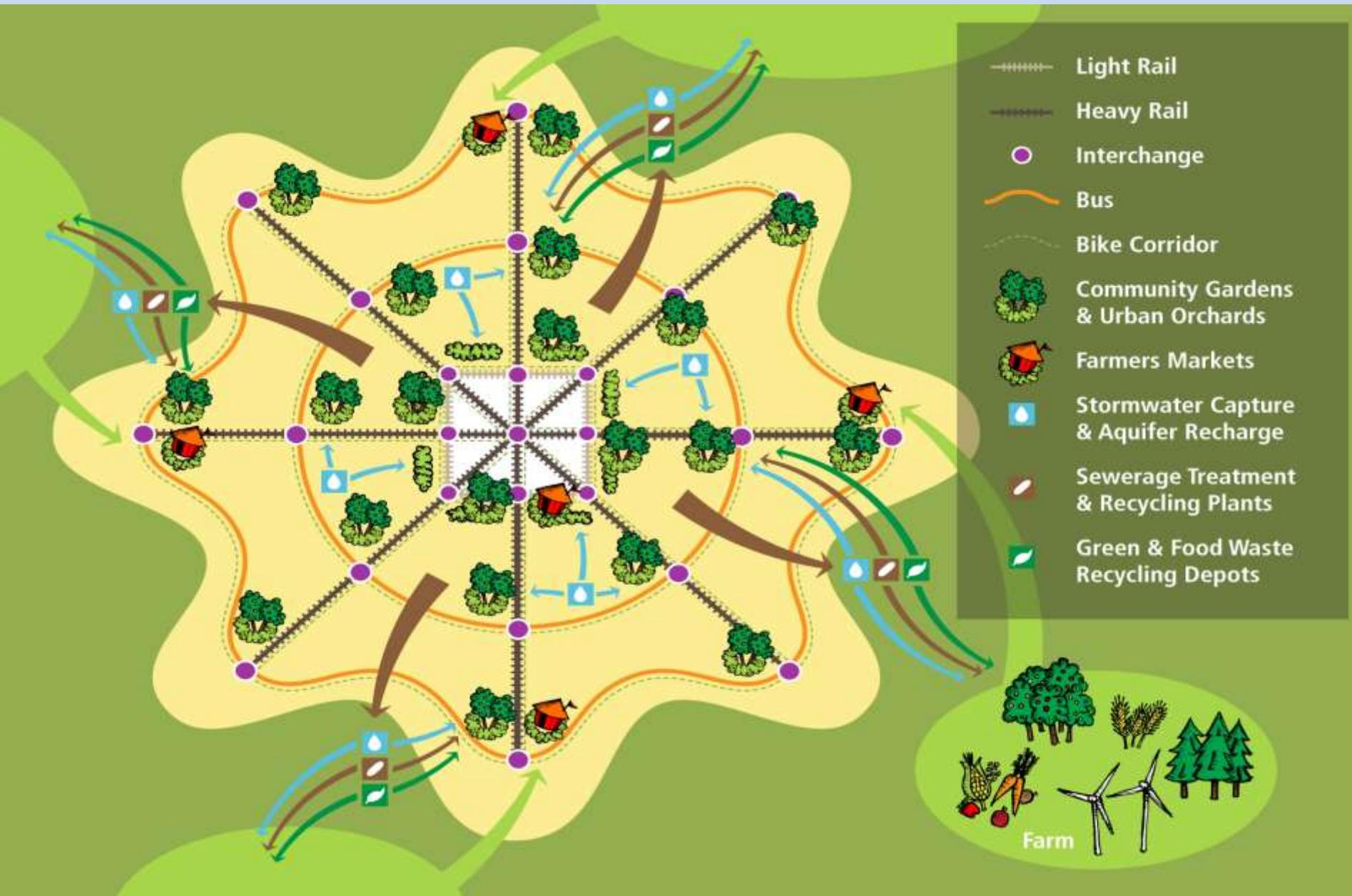




Grading: small scale from Greece



The city is a goldmine of water and nutrients



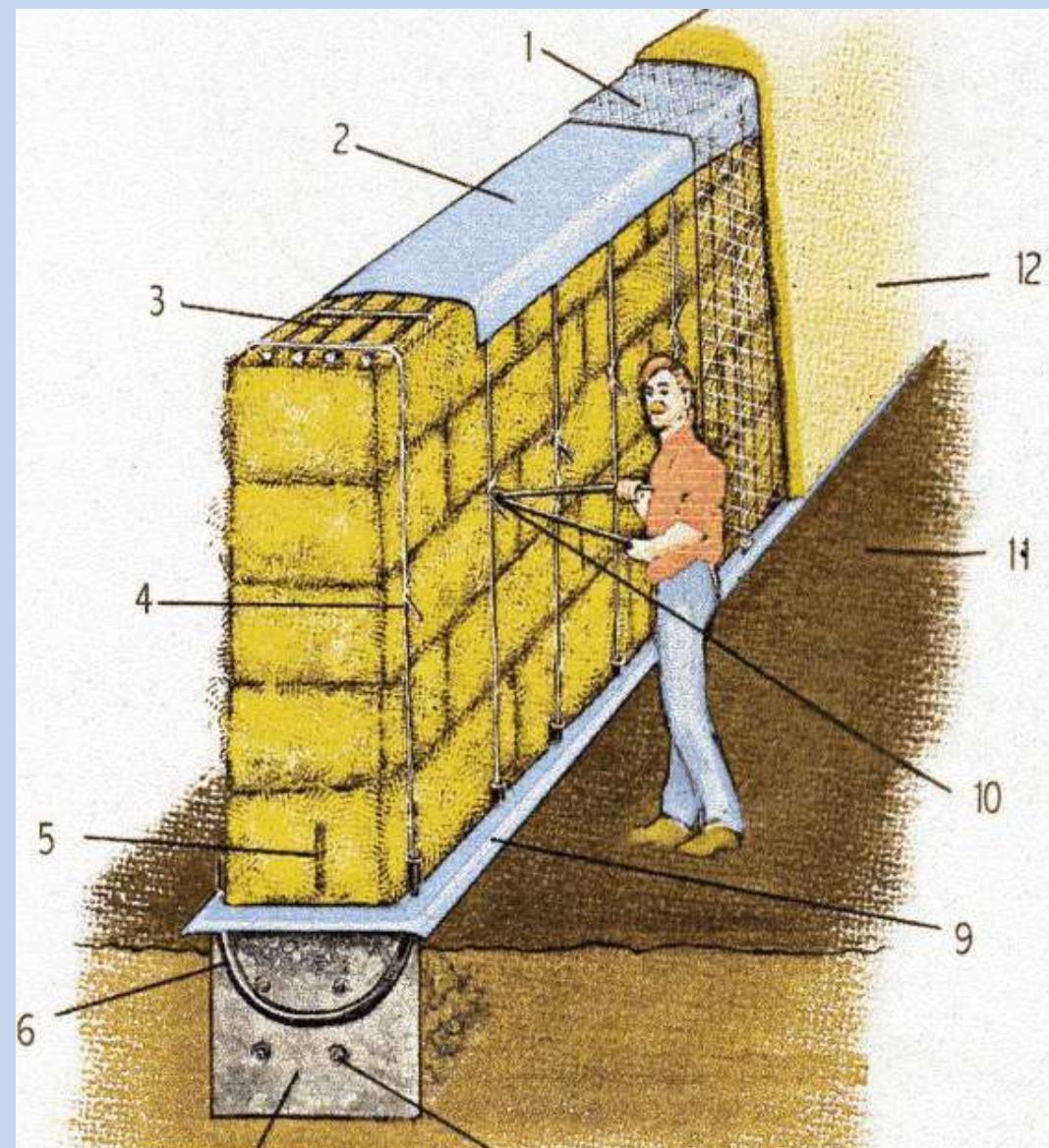
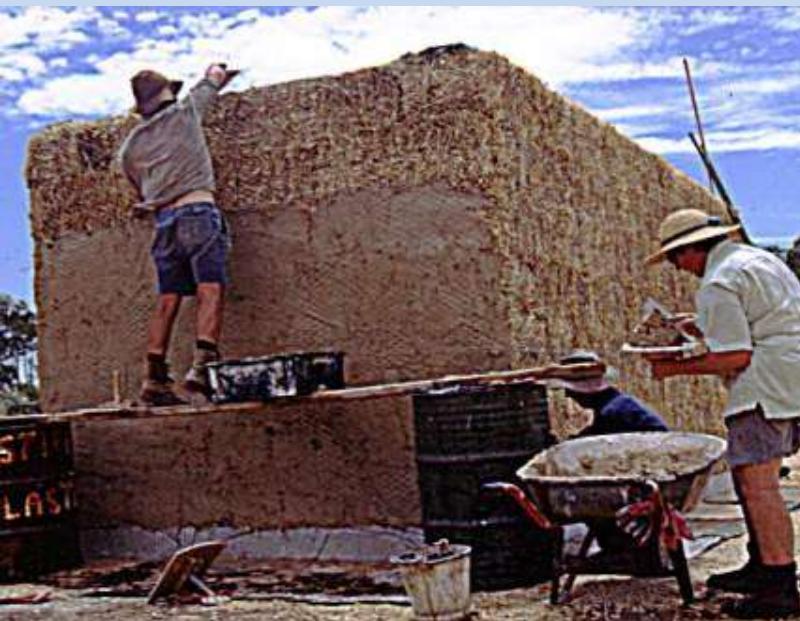
Autumn 2014: Warmest Adelaide autumn on record

- Autumn 2014 was the fourth warmest on record in South Australia and included a record run of 16 consecutive days in May with maximum temperatures over 20 °C within the city and metro areas, making it Adelaide's hottest autumn ever



And now what??

Energy efficient infrastructure



Tree crops -carobs





Energy costs of pistachio processing have been slashed

