


Drought-proofing your garden

A self sufficient water supply is easy to attain. Clive Blazey explains...

Just as climate change is easy to solve, our water deficits are no real threat to our ability to be self-sufficient in food.

Although growing our own fruit and vegetables requires continuous supplies of water (they are  plants by definition) so little space is needed (just 60 square metres) that all houses and back yards have ample supplies.















Our water audit at Heronswood found that we use 570 litres of supplementary water per metre throughout summer to provide us with healthy crops of fruit and vegetables. At a daily rate of 4 litres per day per square metre over the 150 growing days this can be provided by collecting just:







29% of roof catchment potential of the average house,
or
37% of recycled grey water

If you live in the inland hot and drier areas it is expected that a minimum would be 6 litres per metre per day, but reduce to only 2 litres per metre per day for the summer rain fall east coast of New South Wales and Queensland.

ANNUAL GREY WATER USAGE		
House of 2.2 people (Melb.)		Recycled
Toilet	32,000L	No
Bathroom (grey)	50,000L	Yes
Washing (grey)	39,000L	Yes
Cooking	23,000L	No
Outdoor	106,000L	N/A
Total	260,000L	

HARVESTING WATER FOR YOUR GARDEN							
Capital city	Annual rainfall (mm)	Harvesting/roof storage 200m ² (litres)	Growing season (days over 15°C)	Growing season summer rainfall for 150 days (mm)	Average month ÷ 5 (mm)	Average monthly potential tank collection (litres)	Monthly storage (days) 6840 litres ie: 228/day
Melb 	655	118,000	150	264	52	9360	41
Syd 	1214	218,520	240	551	110	19,800	86
Hobart 	628	113,040	90	245	49	8820	38
Canberra 	626	112,680	120	270	54	9720	42
Alice Sp 	200	36,000	240	N/A	?	?	?
Adel 	528	95,040	180	135	27	4860	21
Perth 	873	157,140	270	99	20	3564	15
Bris Apr-Sep 	1151	207,180	300	685/291	137/58	24,660/10,440	108/45
Darwin Apr-Sep 	1661	298,980	360	1403/125	Too wet/25	Too wet/4500	20

Annual rainfall	Metric (mm)	Symbols	Other towns
10-20"	= 240 - 480	 below 500mm	Broken Hill, Broome, Mt Isa, Moree, Mildura, Wagga, Bourke, Dubbo
20-35"	= 480 - 840	 500mm - 850mm	
35-60"	= 840 - 1440	 above 850mm	Albany, Perth, Darwin, Brisbane, Cairns, Townsville

SUPPLEMENTARY WATER NEEDED FOR YOUR GARDEN			
			
Annual rainfall	240–480mm 10–20 inches	480–840mm 20–35 inches	840–1440mm 35–60 inches
Typical towns	Inland – Alice, Mildura, Wagga, Burke, Dubbo	Hobart, Melbourne, Adelaide, Canberra	Albany, Sydney, Brisbane Darwin
Supplementary water	(Guess) 900 litres/m ² 6 litres/day	570 litres/m ² 4 litres /day (Heronswood)	(Guess) 300 litres/m ² 2 litres/day
Combined use	1140-1380 mm/year	1255 mm/year	1140-1740 mm/year
Typical fruits	Quince, Pomegranate Fig Mulberry Olive Loquat 	Apricot Peach Nectarine Plum Almond Citrus 	Apple Pear Cherry Strawberry Avocado Raspberry All vegetables 

The exact size of the water tank needed will vary by town and rainfall but with an annual water requirement of 34,000 litres to sustain a family of 2.2 people a 7000 litre tank should be adequate (see table at left).

With water restrictions applying only to outside gardens and considering that shallow rooted vegetables need daily watering in the early stages, the recycling of grey water is probably a more reliable source. The average house uses 89,000 litres of grey water annually for washing and bathing. This provides a daily supply of 244 litres which is enough to support a fruit and vegetable garden of over 60 square metres. This size is enough to feed 2-3 people with their complete needs of fruit and vegetables for 12 months (242 kilos).

At the Garden of St Erth we have installed a compost toilet and we recycle the water and effluent throughout our garden saving hundreds of thousands of litres of water. Being in the central Victorian region where water restrictions are more severe than Heronswood has forced our gardeners to only plant the toughest plants, but the quality of planting was astounding. If you can visit St Erth between December and April make sure you inspect our espaliered orchard as well as the dry climate garden.



Dry climate garden at St Erth