

## On the farm

It's an exciting and challenging time to be involved in farming. Agriculture is one of the fastest changing industries in the country, accounting for 70% of Australia's total water use. The average day on the farm may not feel like Wall Street, however as new technology and knowledge is applied to our land, farming is looking to be very different to what it was decades ago.

Nationally, we have all experienced a steep learning curve as the causes and extent of salinity and declining river health have become known. It is recognised now that what we need is not a 'business as usual' approach, but changes on the ground.

It is the prerogative of those living on the land more than anyone else, to develop sustainable ways of farming. Protection of land and water resources for

future generations of farmers is not only a desirable outcome of farming but an economic necessity. Environment and economics are inextricably linked. An economic gain at the expense of the environment is inadvertently felt by others: future farmers, neighbours and downstream water users. This is one we have to work together on.

While the water debate ebbs and flows, thousands of farmers have already taken the initiative and changed farming practices in order to be more water efficient and to protect against salinity. There are hundreds of examples of how people are already taking steps towards sustainability, often with the assistance of varying government grants.

Many of the options for change are still in the research phase, or are being adopted by a small but increasing number of farmers. It is clear that more funding for research, development and implementation of new farming systems needs to become available.

*Talking Water* outlines many different ways we can improve land and productivity. They range from small on farm adjustments, to complete restructuring of farming systems. There are always ways we can improve and there's no better time like the present. The following options found in this book provide information on a range of on-farm practices and proposals:

- *Reduce water losses in irrigation channels*
- *Reduce water loss from dams*
- *Improve the way we irrigate*
- *Improve your farm with technology*
- *Protect your land from erosion and salinity*
- *Plant crops for the Australian environment*
- *Stop the leaks in the Great Artesian Basin*
- *Farm livestock for the Australian environment*

Making changes on the farm is not as simple as changing a tyre. There are a myriad of Federal and State government assistance schemes to help with transitions. These can come in the form of direct financial subsidies for on farm changes, training and management courses, community field days and workshops, tax breaks, and other assistance. The following pages outline the main schemes around the country, with further contacts in the *Sources*.



**figure 1 - Computer controlled irrigation**  
(Rubicon Systems Aust Pty Ltd)

figure 2 - Farm assistance programs

Scheme (contact)	Description
<i>National</i>	
<b>Australian Government Envirofund (C'wealth Govt)</b>	The local action component of the Commonwealth Government's Natural Heritage Trust to help communities undertake local projects by grants of up to \$30,000 aimed at conserving biodiversity and promoting sustainable resource use. The 2003 round of funding is for Drought Recovery and will allow 381 projects to be carried out across the country.
<b>National Action Plan for Salinity and Water Quality (State Govts)</b>	National, State and Territory governments have committed \$1.4 billion to be spent over the next 7 years from 2000/2001 for improving water quality in 21 priority areas around Australia. Funding for regional communities in certain catchments for technical assistance, skills training, information and data is planned.
<b>Farm Innovation Program (AFFA)</b>	Part of the Agriculture Advancing Australia (AAA) package whereby grants are provided to farming, food, fishing and forestry businesses to adopt innovative practices, processes and products.
<b>New Industries Development Program (AFFA)</b>	Part of the AAA package to provide funding for new and innovative agribusiness products, technologies and services. AGRIBIZ toolkit is an information source jointly developed with business people from the agribusiness sector to assist farmers in planning and implementing a new agriculture venture.
<b>Farmbis- Skilling Farmers for the Future (AFFA, State Govts)</b>	Part of the AAA package and is a joint initiative of Commonwealth and State governments. FarmBis provides subsidies to primary producers, spouses, farm family members, partners and professional farm managers to improve their business and natural resource management skills to meet the challenges and opportunities ahead for such things as revegetation and irrigation improvements schemes. Support is given to each farm manager to identify the exact type of training they need, and to find the best learning options available at a place and time that suits them.
<b>Farm Forestry Program (C'wealth Govt)</b>	Funding for landholders looking to expand into farm forestry is provided for planning and coordination, education and training, demonstrations and trials, monitoring, research and development.
<b>Environmental Management Systems Incentive Program (AFFA)</b>	Provides support to farmers who develop an environmental management system (EMS). Examples of activities covered under the program include: revegetation, salinity control, windbreaks, and the assessment of water quality. Grants of up to \$3,000 are available.
<b>Prograze (C'wealth Govt, State Govts)</b>	A joint initiative of the Commonwealth and State governments. A course that provides skills and knowledge on grazing management, requirements and production improvements.
<b>National Landcare Program (AFFA)</b>	Support is provided to landholders for the development of locally initiated and managed projects in landcare and conservation. Local landcare coordinators can make site visits to give advice on revegetation.
<b>National Rivercare Program (AFFA)</b>	The program is helping to conserve riverine environments and resources. Farmers may apply for grants to aid in river protection.
<b>Great Artesian Basin Sustainability Initiative (C'wealth Govt)</b>	A joint venture between the Commonwealth Government and all affected States. The initiative's aim is to control all free flowing bores and piping all open bore drains. Up to 80% of the cost of capping the bores is available.
<b>The Living Murray Initiative (MDBC)</b>	Communities and government work together to make decisions on the future of the Murray-Darling Basin through community forums, workshops and information sessions.
<b>Joint Venture Agroforestry Program (RIRDC)</b>	Aims to integrate sustainable and productive agroforestry within Australian farming systems. Provides guides for farmers planning farm forestry.

<b>Heartlands Initiative (CSIRO, MDBC)</b>	The Heartlands initiative aims to improve land use in the Murray-Darling Basin thereby preserving land and water resources and sustaining farming. Groundwork such as tree planting, establishment of perennial pastures and erosion protection is combined with on-going research.
<b>Tax Matters (ATO)</b>	There is a wide range of tax arrangements for primary producers. Tax deductions can be claimed for such activities as landcare operations, building a water facility to conserve or convey water, other capital expenditure, drought mitigation expenditure and the establishing costs of grapevine and horticulture. Tax averaging for the last five years is available.
<b>Farm Management Deposits Scheme (AFFA)</b>	Provides farmers with an effective tax linked savings mechanism to allow them to set aside pre-tax income from the good years to help them better manage their businesses during the most difficult years.
<b>Farm Help Scheme (AFFA, Centrelink)</b>	Provides assistance to farmers who are in financial difficulty. Farmers may look to improve farm performance, obtain off-farm income, or re-establish themselves outside of farming. Call the Centrelink Drought Assistance Line on 13 23 16.
<b>Rural Financial Counselling Service (AFFA)</b>	The scheme gives advice to those in rural areas with assessment of current financial position and cash flow budgeting, loan applications, Centrelink programs, and other matters.
<i>New South Wales</i>	
<b>Waterwise on the Farm (NSW Ag)</b>	A service working in the community involving field days, farm walks, irrigation tours, water management workshops and financial training. Farmers who have completed courses can apply for funding to improve irrigation systems. Each Land and Water Management Plan area has its own incentive package for irrigators.
<b>Whole Farm Plan (NSW Ag)</b>	Murray Irrigation Area irrigators can get financial help with 30% of the cost of doing a whole farm plan, valued at up to \$5000.
<b>Special Conservation Loan Scheme</b>	Funding of up to 90% is available for a wide variety of land improvement capital programs such as changes to irrigation systems and planting perennial pastures.
<b>Property Management Plan (NSW Ag)</b>	Involves a plan of how natural resources of a farm will be used and managed into the future. A PMP considers the production as well as conservation side of farming. Those eligible for FarmBis will receive a 75% subsidy.
<b>Irrigation and Drainage Management Plan (NSW Ag)</b>	A grant of 80% of the cost of an irrigation and drainage management plan to a maximum of \$12,000 per enterprise.
<b>Water Use Efficiency Works Grant (NSW Ag)</b>	A grant of 50% of the cost of the completed works, to a maximum of \$15,000, for works which achieve a significant gain in the irrigation water use efficiency of an irrigation system.
<b>Crop Water Use Monitoring Grant (NSW Ag)</b>	A grant of 50% of the cost of the works and/or services for crop water use monitoring, to a maximum of \$2,000.
<b>Stewardship Incentives (NSW Govt)</b>	An announcement was made in February 2003 that farmers would be paid incentives to become 'stewards' of native vegetation on their land. \$150 million will be handed out over the next 10 years to farmers who conserve and add to the native vegetation on their property.
<b>Groundwater Water Efficiency Scheme (DIPNR)</b>	At least \$15 million worth of funding is available to Namoi groundwater users. It covers activities such as irrigation and drainage management plans and associated works.
<b>Irrigation Advisory Line (DIPNR, NSW Ag)</b>	The Water Use Advisory Unit provides advice to irrigators on salinity-related issues (ph: 1800 255 444).

<b>Land Management Scheme (HCMT)</b>	Provides a financial rebate to farmers in the Hunter catchment to assist in works to address land management problems. Rebates may be given out for: native plantings, fencing off waterways and native plantations, structural soil conservation works, and weed management.
<i>Queensland</i>	
<b>Rural Water Use Efficiency Financial Incentives Scheme (NRM)</b>	Scheme was launched in January 2001 and will run for 3 years. Farmers are eligible for at least \$1500, and in some cases \$10,000, towards the purchase of water meters, soil moisture measuring equipment, weather stations, and improvements to existing irrigation equipment. Farmers must be growing: cotton, sugar, grains, dairy, lucerne, fruit or vegetables.
<i>Victoria</i>	
<b>Fruitcheque (DPI)</b>	Assists fruit and nut growers to achieve best practice in their business.
<b>Grapecheque (DPI)</b>	Innovative program that provides grape growers with access to best practice and quality management systems.
<b>Farm Diversification (DPI)</b>	Provides information and guidance relating to diversifying farm business, such as into wildflowers, wine grapes and firewood.
<b>Firewood and Sawlog Farming Project (DPI)</b>	Subsidies of between \$300/hectare and \$700/hectare for establishing plantations have been allocated in 2003.
<b>Ecologically Sustainable Agriculture Initiative (DPI)</b>	Consists of 18 projects about farming for the future. Information is provided in a series of booklets focusing on biodiversity, environmental management and recycling.
<b>Soil Health Program (DPI)</b>	Aims to address priority soil health issues in south west Victoria and to empower landholders to carry out best management soil practices.
<i>South Australia</i>	
<b>Central North East Arm Farm Assistance Program (DPIR)</b>	Consists of Productivity Improvement Grants of up to \$10,000 and infrastructure grants up to \$5,000 to facilitate improved productivity and sustainability of farm business enterprises. Business Planning Grants assess the financial position of farm businesses.
<b>South East Confined Aquifer Well Rehabilitation Scheme (DPIR)</b>	Financial support by way of grants/loans to facilitate the rehabilitation of poorly constructed confined aquifer wells.
<i>Tasmania</i>	
<b>Waterwise Irrigation Management Course (DPIWE)</b>	The course has been run but modules from the course are available from the website.
<b>Water Development Scheme (DPIWE)</b>	Involves helping farmers with the undertaking of environmental and heritage surveys on their property, mostly dealing with dam location.
<b>Farm Water Grants Scheme (Dept of Ag)</b>	Encourages investment in planning and installation of improved water supplies. Grants of up to 50% of the cost to a maximum of \$15,000.
<i>Northern Territory</i>	
<b>Pastoral Water Enhancement Scheme (DBIRD)</b>	Enhances land and water resource management by providing planning advice and enhancement of stock watering facilities.
<i>Western Australia</i>	
<b>Farm Water Grant Scheme (Dept of Ag)</b>	Encourages investment in planning and installation of improved water supplies. Grants of up to 50% of the cost to a maximum of \$15,000.

# In the home and garden

*"If you think you're too small to make a difference, you haven't been in bed with a mosquito..."*

**Anita Roddick, founder of The Body Shop**

When it comes to saving water, we can all make a difference by changing our habits at home and in the garden.

According to the Australian Bureau of Statistics, 8% of Australia's total water use occurs in the home.

Every household in Australia uses about 294 kilolitres each year. There are differences around the country due to climate (the Tasmanian average is 176kL per year and the Northern Territory average is 500kL per year) but we all know that we could use water more wisely.

Your water meter is the starting point for improving your understanding of water use. Normally water bills show the amount of water used and give you the ability to monitor your use. Some major cities and towns in Australia still don't have water meters, which limits the ability of householders to manage their water use better.

We have compiled a list of ways you can conserve water at home, using a wide variety of sources such as water utilities and government authorities. The list is in order from the greatest water saving down to those small changes that can still make a difference. Add up all the options that you could do at home and you'll be amazed how much water (and money) you could save each year.

While our water use in the garden varies, the opportunities to save the most water are usually in the garden, such as using native plants, reducing the area of lawn to water, and installing a rainwater tank for the garden watering.

For more information on water efficient household appliances, check out the National Water Conservation Rating and Labelling Scheme at [www.wsaa.asn.au](http://www.wsaa.asn.au).

We can all do our bit to save water.

figure 3 - Water use around the home



figure 4 - Rebates for rainwater tanks

State	Tank Size (L)	Rebate Amount (\$)
NSW	2,000 - 3,999	\$150 **
	4,000 - 6,999	\$400 **
	7,000+	\$500 **
Many councils and water utilities, such as Sydney Water, Gosford City Council and Wyong Shire Council		
Vic	600+	\$150 Vic Government, Dept of Primary Industries
QLD	1,000+	\$500 *
	3,000	\$500 (Available until June 2003) From Brisbane City Council
ACT	4,500 - 8,999	\$200
	9,000+	\$500 From ActewAGL
WA	600 - 1999	\$50 *
	2,000+	\$150
	2,000+	\$300* From WA Water Corporation
SA	No Rebate (SA Water, 2003) Rainwater tanks recommended. Guide available from HealthSA.	
Tas	No Rebate (Hobart Water, 2003) No recommendations have been made	
NT	No rebates or recommendations (NT Power and Water, 2003)	
* Connected to at least one internal household fixture (toilet, laundry)		
** An extra \$150 available if connected to internal household fixture (toilet, laundry)		

figure 5 - Ways you can save water

ANNUAL WATER SAVINGS	WATER SAVING OPTIONS
150 kilolitres	<p><b>Convert your garden to a ‘waterwise’ garden</b></p> <p>Choose native plants that don’t need much water and are suitable to your garden. Use plenty of mulch to reduce evaporation and weed growth. Improve your soil with lots of organic matter. Keep the amount of lawn to a minimum and don’t use it as a ‘fill in’ material.</p>
125 kilolitres	<p><b>Recycle your ‘greywater’</b></p> <p>Save the water from your kitchen, laundry and bathroom (not the toilet), put it through a natural filter and use it for your garden and to flush the toilet. Many government agencies have guidelines for how to recycle greywater.</p>
75 kilolitres	<p><b>Install a drip irrigation system</b></p> <p>Many drip irrigation systems are easy to install and can be purchased from your local hardware shop. With these systems less water is lost to evaporation and wind-drift. Some ‘smart’ systems include controlling irrigation using soil moisture, wind sensors and rain gauges.</p>
70 kilolitres	<p><b>Install a rainwater tank for your toilet and your garden</b></p> <p>Tanks can come in all shapes and sizes (see <i>Storing more water</i>). There are regulations about exactly how the tank can be connected with the toilet so get advice from your local Council. Rebates are available (see figure 4).</p>
60 kilolitres	<p><b>Compost your own!</b></p> <p>A waterless toilet works just like the garden compost bin, with your waste being mixed with wood shavings and garden clippings. Ventilation is very important to the process. Check with your local Council for their requirements.</p>
50 kilolitres	<p><b>Fix that leaking toilet!</b></p> <p>If you can hear a leak in the toilet then it is time to fix it. A leak from a toilet can sometimes be seen flowing at the back of the bowl (you can add some food colouring to the cistern to check). Often the only thing needed is a new washer. Ask you local plumber for help.</p>
40 kilolitres	<p><b>Install a rainwater tank just for your garden</b></p> <p>You can install a rainwater tank just for garden. Again, there are probably local council regulations and rebates available (see figure 4).</p>
30 kilolitres	<p><b>Halve your grass!</b></p> <p>For those that water their lawn, reduce watering to half as often, replace half your lawn with a garden of native shrubs, or replace the non-Australian grasses with native grasses such as danthonia, microlaena, themedata and bothriochloa.</p>

## ANNUAL WATER SAVINGS

## WATER SAVING OPTIONS

30 kilolitres

**“If it’s yellow let it mellow, if it’s brown flush it down.”**

Don’t flush the toilet if its only liquid; it’ll be flushed when it’s a solid! The toilet will still get flushed more than once a day.

25 kilolitres

**Install a water-efficient showerhead**

Water-efficient ‘AAA’ showerheads use less than 9 litres of water per minute, compared to a normal showerhead that uses 25 litres per minute. They often also have an on-off facility for shampooing, which will use less hot water and therefore save energy as well.

25 kilolitres

**Convert to a water-efficient washing machine**

A standard top loading automatic washing machine uses about 125 litres per wash. A standard front-loading washing machine uses about half the water and half the energy of a top loader. There are water efficient top loading washing machines available too.

25 kilolitres

**Mulch, mulch, mulch!**

Mulching keeps the soil underneath moist, prevents evaporation loss and is one of the cheapest ways to make the most of water in the garden. Ensure the mulch is thick and is placed away from tree trunks to prevent collar rot, and has an even coverage to prevent the growth of weeds. Water storage crystals are now available that help to retain water by slowly releasing water to the plant. Some fertilisers, such as seaweed extracts, help root growth and can help plants survive dry times.

25 kilolitres

**Convert to a dual-flush toilet**

New dual flush toilets use 6 litres of water for a full flush, and 3 litres for a half-flush. Some older cisterns use 11 litres with each flush.

25 kilolitres

**Cover that pool!**

If you own a pool, using a pool cover will reduce the water lost to evaporation. A pool cover will also reduce the chemicals needed and the amount of leaves that fall into the pool.

20 kilolitres

**Share a shower or be quick about it!**

Share a shower and save money on both your water bill and your energy bill. A typical shower uses about 25 litres every minute and lasts on average about 8 minutes. If you share a shower or take a shorter shower instead, you can save money and water.

20 kilolitres

**Don’t forget that sprinkler!**

A forgotten sprinkler can waste thousands of litres of water per hour. A sprinkler timer will allow you to use as much water as is needed without wastage.

## ANNUAL WATER SAVINGS

## WATER SAVING OPTIONS

15 kilolitres

### **Convert to a water-efficient dishwasher**

The best dishwashers have highly effective spray systems and use water efficiently during the wash and rinse cycles. Don't forget to only use your dishwasher for full loads. The new efficient models are reported to use about the same water as washing by hand.

15 kilolitres

### **Turn off the tap when brushing your teeth!**

The tap doesn't need to be on while brushing your teeth.

10 kilolitres

### **Convert to water-efficient taps**

Water efficient taps use 50% less water than standard tap fittings. Efficient taps include ceramic seal taps, flow regulators, lever or mixed tap, quarter turn taps and aerators.

10 kilolitres

### **Rinse the fruit and vegies in the sink**

Instead of rinsing your fruit and vegies under the tap, half fill the sink and give them all a good scrub at the same time.

10 kilolitres

### **Put a brick in your toilet**

If you have an older toilet put a brick or water filled bladder (like a wine cask) into the cistern to reduce the amount of water used with each flush. You can also simply bend the arm of the cistern to reduce the amount of water the toilet uses. You can also install a 'toilet flush arrestor' to reduce the water used with each flush.

10 kilolitres

### **Fix that leaking tap!**

A leaky tap can often be fixed for the price of a washer. Large leaks can waste thousands of litres of drinking water per day.

10 kilolitres

### **Don't hose the driveway - it won't grow!**

Use a broom or rake for leaves rather than the hose.

10 kilolitres

### **Don't pamper the plants!**

Watering less often encourages plants and lawns to grow deeper roots. A good soaking every now and then will help make plants and lawns healthier during dry periods. And remember not to water your garden in the heat of the day as more than half could be lost to evaporation.