J. Popovic

Summer

Canberra Organic

ORGANIC GROWING IN THE CANBERRA REGION

Quarterly publication of the Canberra Organic Growers Society Inc.

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Summer 2003

CANBERRA ORGANIC

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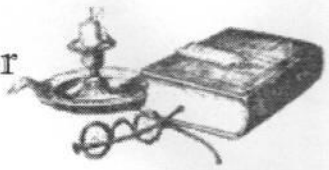
From the Editor



Hello again!

Thank you to the many COGS members who have contributed both articles and regular segments to this issue. A report of new experiences in organic farming and an adventure in gardening organically in Dar es Salaam supplement the accounts of local organic gardening!

John Turnbull, convener and long-term member of the Charnwood garden, has written our community garden feature for this issue—and included lots of pictures to tempt you to visit the garden next February at the peak of its summer productivity. After a sterling effort getting COGS Backyard ready for the re-opening of Xeriscape on 20 October, Jane Andrews has found time to write about it!

Following the introduction of tighter water restrictions in the A.C.T.—weather, watering and water conservation topics have been included. Our Organic Tips and Techniques page this issue comprises advice from Cedric Bryant, ActewAGL's save water ambassador, on how to maintain your garden during Stage 3 water restrictions.

We are also grateful to Bill Hankin, President of the Soil Association of South Australia, for sending us his frank report on the recent National Organic Conference.

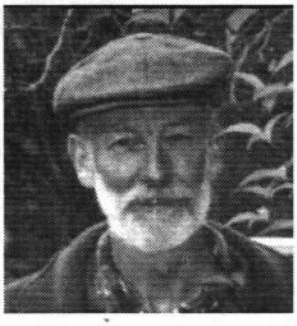
Please take some time to jot down something about your gardening experiments/ experiences during the coming growing season and please send in photos of your fabulous summer produce!

Janet Popovic

Special thanks to Arthur's Vegetable Clipart.

Garlic again!

Biologists from the University of Newcastle, UK, are reported to have found that garlic oil repels slugs and snails. Researcher Dr Gordon Port says that prolonged exposure to the garlic oil can kill the slugs – they overproduce mucus and appear to dry up. Further tests will be done but Dr Port suggests gardeners try it out to find an appropriate concentration that is effective. *Source: BBC News*



President's Report
Summer 2003

The new gardening season is now underway. Hopefully it will be a better year than the last. We have had a reasonable amount of rain this winter. The sub-soil moisture (at least at the Cook garden) seems to be in reasonable shape and should help us to cope with the level three water restrictions for the first part of the season. The importance of COGS community gardens being seen by the public to comply with the water restrictions cannot be over emphasised. It also provides us with an excellent opportunity to demonstrate the practicality of using organic growing techniques with the minimum use of water. There are a couple of articles in this issue of the magazine which will help gardeners make the best use of the available water.

October has been unusually cool with a few frosts. Early November also had a frost which brought home to those who lost their tomatoes the hazards of planting frost sensitive plants before the Melbourne Cup. With the good rainfall during winter and coolish conditions so far in spring most of the COGS gardens are now starting to look really good. If you are thinking of taking a plot in a COGS garden now is a good time to start. There are still a few plots available in some of the gardens. The Bureau of Meteorology's seasonal outlook for November 2003 to January 2004 is for average rainfall for the ACT with temperatures about normal. Hopefully this will be enough to give us good crops this season in spite of the water restrictions.

It is good to see a lot more produce for sale and exchange at the recent COGS meetings. This adds a great deal to our meetings and more members are encouraged to bring along their surplus seeds, seedlings or, later in the year, vegetables for sale or exchange with other members. Those members who have not yet attended one of the monthly meetings are urged to come along to see what is available. There are also organic gardening books for sale as well as COGS library books and magazines available for loan. All this is in addition to the interesting line up of speakers we have had during the year.

The Committee will be having a planning meeting in November to plan next year's activities. If you know of any speakers you would like to hear or if you have any activities which you think COGS should be undertaking please contact me, or any member of the Committee, and give us your ideas. After all, it is your organisation so please do not hesitate to let us know what you would like to see COGS doing and how you would like to see the organisation develop.

The last meeting for the year is on 25 November and Barbara Schreiner will be speaking about plant propagation. The first meeting for 2004 will be on 24 February and I look forward to seeing you all there. On behalf of the Committee I would like to thank everyone for your support during the year and wish you a merry Christmas and a happy new year. I look forward to another successful year for COGS in 2004.

Happy gardening

Keith

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Around the Gardens

Charnwood
See feature on page 10.
Charnwood garden is hosting the organic gardening course for beginners that started on 2 November. There are currently several vacant plots.
John Turnbull

Cook
Alan Robertson has taken over from Keith Colls as convener and is also the new COGS Vice President.

Cotter
All plots are now occupied and there is one person on the waiting list. Spring has been a busy time at the garden. A couple of working bees have seen the sprucing up of the garden area, the removal of a dangerous dead tree and the gravelling of the entrance drive. Funding for the gravel was kindly provided by COGS.
Ann Smith has arranged for the repair of our leaky tap to save water. All sprinklers have been removed from the garden. Weekly water usage will be displayed during the summer as a water saving measure. Ann Smith and Betty Cornhill are coordinating the supply of sheep manure and hay for mulch.
Andy Hrast

Erindale
Everyone is busy planting various seeds/ seedlings and earlier sowings of peas and broad beans are several feet high with lots of flowers, ready to produce! We are gradually replacing dilapidated boxing while at the same time improving the state of adjacent pathways. All in all the garden is looking better than ever. Two new families have joined and it is a pleasure to see their enthusiasm and to receive their offers of help. Presently all plots are spoken for.
Christine Carter

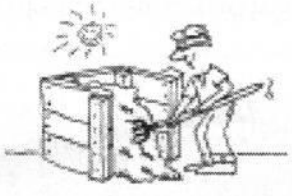
Holder
Six new gardeners have taken up plots in the Holder gardens. Vacant plots = 0, Persons on waiting list = 0. Several baby brown snakes sighted during October. During winter we experienced more severe frosts than before (-10 to - 12°C) due to the removal of the burnt out pine tree plantation to the east of our gardens.
Stephen Dean

Northside
There are several vacant plots.

Queanbeyan
Railway Park garden is now in its third year of operation and is entrenched as part of the community in west Queanbeyan. We have had no incidents of vandalism this year, and most of the gardeners survived last summer's dry weather to stay with the garden. We have had also a steady stream of inquiries from people interested in taking up plots. Currently there are five vacant plots of 9 sq metres each, which are levied at $7 pa.

The garden is now facing some of the challenges that have arisen in older gardens—finding people to take over coordinating the various responsibilities involved in this type of community venture. The garden's co-conveners were deeply involved in establishing the garden, which took around 10 months, and have been undertaking their current role since the garden began operating in September 2001. Finding and encouraging people to take over these roles in community gardens is important. It is part of the process of constant renewal, it shares the responsibility for tasks which, if not undertaken, would soon see the gardens and COGS cease to operate effectively, and it allows people to take up these roles in the knowledge that they will not be expected to do the jobs for years on end. Many people seem content to come and garden, and take little if any interest in the management requirements or jobs which should be a common responsibility. As an organisation I feel that we need to find new ways to encourage, support and where necessary train responsible people to take on the role of convener.
Katrina Willis

Theodore
Theodore has a few plots currently available and would warmly welcome new gardeners.
Richard Reed



Watering a Vegetable Garden in Canberra*

by Richard Stirzaker

Introduction

Many established trees and shrubs can survive on natural rainfall alone in the Canberra region. The lawn should be watered (at most) just enough to keep it green - additional water means more growth and more mowing. Vegetables are different. Here we are going for maximum production from small areas of land. We must also recoup the expense of seedlings and other inputs, as well as the effort of digging, weeding and making composts.

Annual rainfall in Canberra is about 630 mm. The potential evaporation has an average value of 1700 mm per year. That means if we had a large drum full of water standing on the lawn, the level would go down by 1070 mm (over 1 metre) every year. This is why we need to irrigate - the potential loss of water exceeds rainfall. In practice, our vegetable garden does not lose water at the potential maximum rate, particularly when the plants are small.

Our long-term average rainfall in Canberra is fairly well distributed throughout the year, but there is a lot of variability within any particular year. Winter feels wetter than summer because the potential loss of water is so much less. In most winters plants hardly need any irrigation at all. Summer is a different story. This talk is about knowing when to irrigate, how much water to apply at one time, and how to minimise the water needs of the vegetable garden.

What do plants use water for?

Vegetables need a lot of water. A tomato plant requires at least 10 litres of water for every fruit produced, and the fruit itself is over 90% water. Maize plants may use around 600 litres of water to make just one kilogram of grain. All this water is lost through transpiration. Plants lose water from their leaves as they capture carbon dioxide from the atmosphere. Carbon dioxide is the raw material plants use for making sugar, a reaction powered by the energy from the sun. As the small holes on the surface of the leaves open to let the carbon dioxide in, water escapes from the wet leaf to the dry air. Transpiration also helps to keep the leaves cool.

Soil and irrigation

Since water is stored in the soil, it is vital to know something about our soil before we can irrigate accurately. Plants need a bit of water every day, but rainfall comes in irregular lumps. It is the soil's job to store as much rain as possible when it comes, and slowly release it to the plant. Soil is a mixture of particles of different size. Large size particles are called sand, fine particles called silt, and microscopic particles are called clay. These particles are packed together to form the soil structure, and the holes or pores between the solid particles contain water or air. The number of soil pores and their size determines how much water a soil can hold after rain. Small soil pores contain water and large pores are filled with air. Sandy soils, which are dominated by large particles, also have large holes between the particles and therefore contain more air than water. As the clay content of the soil increases, the pores become smaller and more water can be held.

Plants cannot get all the water out of the soil. Each time a drop of water is taken up by the plant, the remaining water is held ever more tightly by the soil. Table 1 gives some idea of how much water is held in sandy soil, loamy soil (roughly equal mix of sand, silt and clay) and a clayey soil. The numbers are only guidelines to illustrate the difference between sand and clay dominated soils. The amount of water in the top 100 mm of soil after rain, and left in the soil when the plants are wilting, is given in mm, just like rainfall. The available water is calculated as the difference between what the soil can hold, and the amount that the plants can get out before wilting.

The example in Table 1 below shows that clay soils can hold a lot of water but the plants cannot get much of the water out again. Sandy soils hold little water, but most of it is available to the plants.

When to water

There are three approaches we can take to help decide when to water. We can observe the plants, observe the soil or measure the "dryness" of the air. I will briefly discuss each in turn.

Type of Soil	Water held in the top 100 mm of soil - day after rain	Water held in the top 100 mm of soil - plant wilting	Available for plant
Sandy	15 mm	4 mm	11 mm
Loamy	35 mm	12 mm	23 mm
Clayey	40 mm	25 mm	15 mm

TABLE 1

Plants By the time plants have wilted, they have run short of water and the potential growth rate will have been reduced. Therefore wilting is not a good indicator for when to turn the tap on (although we all get caught out). Some plants, like carrots, don't wilt until they are very stressed, whereas others, like snow peas, often wilt in hot weather even when they have plenty of water. With practice you can recognise the early signs of wilting for different species eg. leaf rolling in sweetcorn in the middle of the day, and use this as a cue for irrigation. There are scientific instruments for measuring how "thirsty" a plant is, but none are applicable for the home garden.

Soils It may seem too obvious, but the best tool for telling us when to water is the common garden spade. It is easy to tell if the surface soil is wet or dry by look or feel, but what is happening 20 cm down? After a spell of no rain, dig a hole and get some idea where the roots are and how deep the irrigation water is penetrating into your soil. The soil should be wet 30 cm down.

There are instruments we can use to measure the "wetness" of the soil. A tensiometer is a small instrument that tells us how hard plants must "suck" to get water out of the soil. They are usually only used for scientific purposes or by large commercial growers. You may not be able to justify the purchase of a tensiometer on economic grounds (they cost up to $100), but they are a good educational tool and fairly easy to use. One problem with using a tensiometer is that it only measures the soil water in one part of the garden. In a vegetable garden, plants are at different stages of growth, and the water content of the soil can vary widely. The cheap water meters (probes) available at garden stores do not work very well and are not worth purchasing.

Air Measuring the dryness of the air is quite easy and gives a rough estimate of how much water plants would require. We estimate the dryness of the air by measuring the amount of water that evaporates from a large, straight-sided container of water (the container usually has a diameter of 1.2 m, but for the home garden 30 cm would do).

The distance that the water level in the container falls is measured (daily or weekly) and called pan evaporation. It is recorded daily in the *Canberra Times* weather section.

Be warned - this section contains a few calculations.

Let us assume that there is an average Canberra soil that has a 100 mm deep sandy top soil above a clay subsoil. Table 1 shows that there is 11 mm of water available in the top 100 mm, and 15 mm in each 100 mm of the clay subsoil.

The critical factor is how deep into the soil can the roots get. Tomato roots may go deeper than 1 metre in good soil but they have a tough time trying to grow through clay. If the roots get 200 mm down into the clay, then the total available water in the top 300 mm of soil is:
11 mm (in the top soil) + 15 mm + 15 mm (200 mm of clay soil) = 41 mm.

Now we don't want the plant to take all the available water out of the soil so that the plant wilts.

Let us assume that we can take half the available water out of the soil without compromising yield. Our 300 mm depth of soil can only supply the plant with 20 mm of water.
On a very hot summer day, about 10 mm of water would evaporate from our container, but fully grown tomatoes would lose about 80% of this. In other words, tomatoes would lose about 8 mm of water a day from the soil. Thus after two and a half hot days (2.5 x 8 = 20), we will have to irrigate.

We can also calculate the volume of water to add. Imagine a bed of fully grown tomatoes 10 m long and 1 m wide. To calculate the volume of water the tomatoes used we need the area of the bed (10 m^2) x the water used (8 mm). This gives 80 litres of water per day (there are 1000 litres - a kilolitre - in $1m^3$ volume).

As you can see there are a few guesses in the calculations above, but it gives some idea about important factors like soil type, depth of rooting and the effect of the weather. If you like doing calculations you can get some idea whether you are applying too much or too little water. Use the water meter in the front garden to measure the volume of water you are using (and make sure no taps are on in the house).

Our Canberra garden

Our vegetable garden is large, about 350 m^2 (35 m by 10 m) and produces almost all the vegetables for a family of three with considerable surplus in summer. In the introduction I said that the potential evaporation in Canberra is about 1000 mm greater than the rainfall. Thus the maximum amount of water my vegetable garden would need would be 350 000 litres. Before the new water regulations came in last year, ACTEW allowed each household a total of 350 000 litres per year before charging for excess water (just under 1000 litres per day). That means all our below quota water would go to the vegetable garden. In practice we have never had an excess water bill, even though about half of our total water consumption is used in the home, for flower gardens and for fruit trees.

There are several reasons why our garden requires much less water than the maximum amount predicted above. When beds are empty or plants are small, water is lost at much less than the potential rate. Most of the vegetables are planted as seedlings, so we are not using water inefficiently on small plants. The garden is laid out carefully with paths giving good access to all parts of the garden so that weeds, which steal a lot of water, can be easily controlled. We use drip irrigation, so that the paths are never watered and soil evaporation is minimised. Lastly, most of the crops are mulched.

The critical factor to understand when irrigating the vegetable garden is the role of soil evaporation. When the soil surface is wet, water is lost at the maximum potential rate. That means that you lose as much water from a bed of tiny tomato seedlings which have been sprinkler irrigated as you lose from two metre tall bushes covered with leaves and fruit. In fact up to half the water applied to the vegetables can be evaporated directly from the soil. After the soil surface has dried, water is lost much more slowly.

There are several ways to minimise soil evaporation. The most obvious is to use a mulch. There are many types of organic mulches, some that are much better than others, but I do not have the space to discuss this here. Mulches do have a disadvantage in Canberra, because mulches delay the warming of the soil in spring. It is best to wait until the soil has really warmed up before applying a mulch. Another way to minimise soil evaporation is to give more water less frequently, so we do not wet the soil surface every day. For most of the year, watering once or twice a week is sufficient.

The biggest water saver of all is to have a good irrigation set up. A vegetable garden is a mixture of small and big plants, all requiring different amounts of water. Putting a sprinkler over the whole lot is very inefficient. Watering by hand with the hose is even worse, because we invariably put too little water on this way. In our garden, each row can be drip irrigated separately. The drippers are spaced 30 cm apart and give 2 litres per hour. Drip irrigation is excellent for plants that grow in widely spaced rows, such as tomatoes, capsicums, zucchini, peas etc, where the plant is situated right next to the drip line. In most soils, drip irrigation is also suitable for narrower spaced crops, such as lettuce, where the drip line may feed two rows. It is less suitable for crops in narrow rows that are grown from seed, like carrots. Micro jets are excellent for evenly wetting the entire bed and for raising seedlings, but use a lot more water than drip irrigation.

Further tips for minimising water use

1) Plant seedlings

Since germinating seeds require frequent watering, a lot of water is wasted through soil evaporation. The Canberra season is short, so it is usually best to grow your own seedlings in a protected environment (or buy them). Some vegetables should always be direct sown into the garden. These include carrots, beetroot, peas, beans and com. Most other crops grow well as transplants

2) Improve the soil—There is not much we can do

about the amount of sand or clay in the soil, but the addition of organic matter improves the water holding capacity of both sandy and clay soils. We use raised beds, where top soil is dug out of the furrows and piled onto the beds to give double the depth. This allows the roots to go deeper into the soil. The example above, of a root system only 300 mm deep, shows how quickly shallow rooted crops will run out of water.

3) Drainage
It is important that your soil drains well after rain or irrigation. Clay soils easily get waterlogged and will severely reduce plant growth. Raised beds with furrows between them, in which excess water can drain away, are essential for soils prone to waterlogging.

4) Buy a rain gauge
The amount of rain that falls in a single one hour thunderstorm or overnight steady rain is very difficult to guess. A summer storm may drop 10mm of rain in 20 minutes of pelting rain and water may be running off the soil surface. When the sun comes out, some of the water will evaporate before the plants can use it and the rest will be gone in a day or so. On the other hand 20 to 30 mm of steady rain will satisfy the garden for a week or so.

5) Nutrition
If the vegetables do not have adequate soil nutrients, no amount of water will produce a good yield.

6) Sensitive stages
There are critical times in the life cycle of a crop when water is required. Water stress during these short periods will cause big losses in yield. In general the flowering and fruit enlargement phases are most critical, and, in the case of leafy vegetables, the time of "heading" or maximum leaf growth. Most vegetable plants can cope well with water stress during the early vegetative stage, and there will be little loss in yield. Water stress during fruit ripening is also allowable and can improve flavour.

7) Trees
Trees roots can travel sideways for a distance at least the height of the tree. Site the vegetable garden in full sun as far as possible away from trees.

Conclusion

The section on "When to water" above may have been a bit depressing, because there is no easy fool-proof method. Working out when and how much to irrigate is still an important scientific problem. In commercial agriculture, vast amounts of money are lost each year by poor irrigation practice, and severe damage is done to the environment by over-irrigation. On the bright side, just by digging a few holes, or doing a calculation, you can get a good idea of what is happening in your soil. The use of micro-irrigation, mulches and seedlings will go a long way to making best use of your water.

Further reading

A good easy to read book on this subject is "When should I water" Discovering Soil series No.8, CSIRO Division of Soils. Available from Australian Government Publishing Service Bookshops in capital cities or from CSIRO Publications, PO Box 89, East Melbourne, 3002.

Richard Stirzaker

** This article is reprinted from a COGS publication of the Proceedings of Water-Wise Organics, a one day seminar on organic gardening presented by the Canberra Organic Growers Society. Held at Corroboree Park Community Hall, Ainslie, 19 November 1994.*

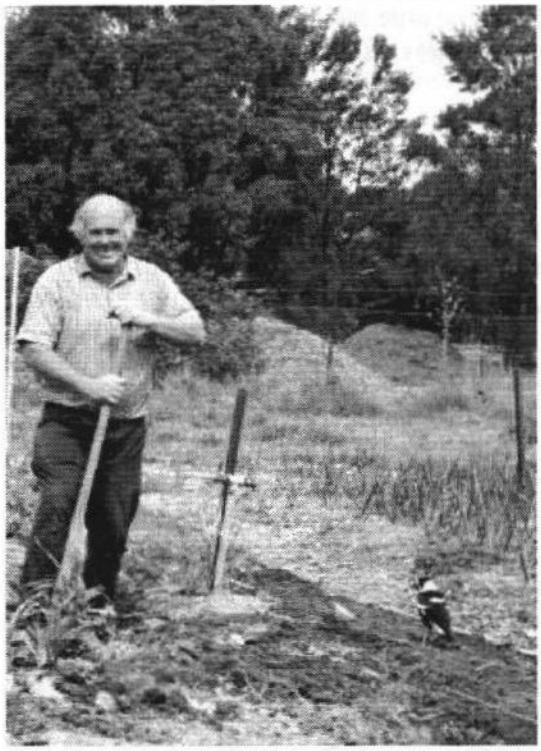
Delectable Organic Delights!

The Future of Ecolabelling in Australia Conference was held in Canberra in October 2003. We'll keep an eye open for Conference outcomes but we've glimpsed the Conference Dinner menu and it looks superb, all the food certified organic of course with each company providing the ingredients acknowleged alongside the particular menu item! Pre-dinner drinks were organic wines and fruit juices; entrée was an antipasto platter with gherkins, olives and char-grilled vegetables; mains included char grilled sirloin with red wine and mushroom jus, oven baked fish fillet with citrus sauce and fresh herbs, and seasonal vegetables vegetarian plate. Dessert was a cheese, chocolate and fruit platter followed by organic teas and coffee, with certified organic honey and milk. On that basis there should be some good Conference decisions to look forward to!

Trailing Summer Colour

Try a *Growin' Bag*. (I bought mine at a COGS general meeting for $4). This is a long heavy grade green plastic bag with handles. It has slits in one flat surface through which to plant a showy display of seedlings such as impatiens, strawberries, pansies, or herbs. Give it some shelter so that the soil does not dry out too quickly or the bag overheat. JP

Charnwood Community Garden



The Charnwood Garden is approximately 15 years old. I have been a member for approximately 10 years and convener for one year. When I joined, the garden was overgrown with weeds, 2 metres tall in some plots. A drain half a metre wide ran through the middle of the garden. The front half of the 'garden' was just bare rock and there was a swamp to one side.

As a keen gardener I formed a vision for the garden and decided that I could make a difference. I have been pursuing that vision ever since. Over the last ten years I have gradually developed the waste area so that it could be used for productive growing. The productive area of the garden has now doubled with the previously unused areas converted into:

- a holding area for wood chips – to be distributed on pathways/ decomposing to make more soil;
- 2 plots where Borek grows fruit trees;
- an area for communal fruit trees;
- a large plot for growing pumpkins and potatoes I can share with other gardeners who do not have room to grow these crops in their individual gardens; and
- an area at the front gate for the use of participants in the COGS/CIT beginner gardener courses.

I have always tried to "think outside the square" with respect to the development of the garden, looking for creative ideas and projects that have more than one purpose. Two projects have been to:

- cover the walkways with wood chips to create practical attractive plot dividers that help to keep down the weeds but at the same time provide future compost for the garden. This process attracts worms that of course are also beneficial to the garden.
- create large development plots in the garden by laying weeds, wood chips and sawdust on the ground and covering them with soil. These are then planted with pumpkins and potatoes. In the following season I bring the decomposing bottom layer to the surface and start the process again in another undeveloped area of the garden.

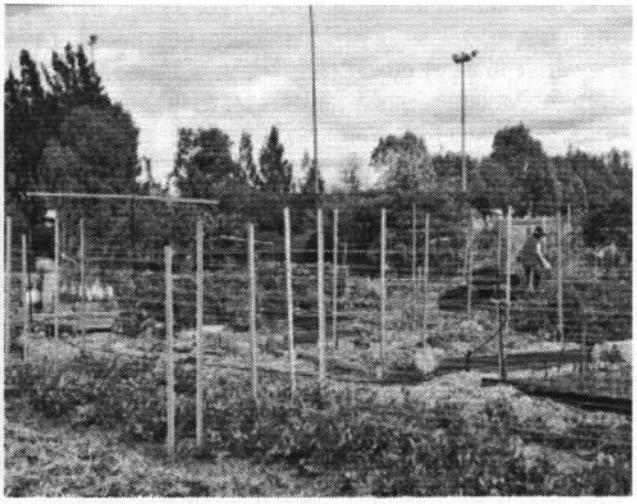
There is always a good cause to benefit from any vegetables I grow that are excess to requirement. I share them with other gardeners in return for their various contributions to the garden. I have left fresh vegetables for the school canteen and donated them to the P&C. My wife is well known for pumpkin soup fundraising for aged care and my vegetables have also gone to church fund-raising for mission and outreach in East Timor.

The strong community garden spirit present in the Charnwood garden has evolved gradually. We were sad to lose Paul and Vicky to the greener pastures of the North Coast. Fortunately they introduced Carmen and Robert who have become valuable members of the garden and whose support and enthusiasm for my endeavours spur me on to achieve a high standard for the garden. Carmen is our resident horticulturalist and her knowledge shared with other members is invaluable. I have mentioned Borek who introduced fruit trees to the garden. Recent members joining this year are Stephen, Carmen, Yvonne, Fritz and Irene. I feel their membership is only going to enhance the spirit the garden now enjoys. All are willing to contribute to the garden as a whole. Yvonne's knowledge of cooking and preserving will help us to enjoy the rewards of our hard work. Fritz and Irene have a glasshouse at their home that will enable us to have advanced seedlings ready to put in when the risk of frosts is over. Stephen has a friend on a farm from whom we can obtain a continuous supply of horse manure that we will use as mulch and manure for the garden…..

We have only a few members and I think this is one of the reasons for our current success. It is the quality and dedication of the gardener and not the quantity of gardeners that make a successful community garden.

John Turnbull

Charnwood community garden invites COGS members to visit in February 2004! Details next issue.



Grow these health giving summer plants

Have you ever done a quick search on the net or in books-for-the-health-conscious for advice on the top health foods? I suggest that you are more than likely to see in the various listings of the favourites of the health gurus many of those fruits and vegetables that either we should already have growing in our gardens or that we can start planting or sowing during the summer season. My quick search came up with the following:

- Berries, especially strawberries, blueberries
- Carrots, pumpkin and orange sweet potato, ie the orange-coloured vegetables
- Cruciferous vegetables such as broccoli, cabbage, brussels sprouts and cauliflower
- Leafy greens such as lettuces, spinach, kale and chard
- Onions, garlic and leeks
- Potatoes
- Sweet peppers
- Tomatoes

As I have no expertise in the assessment of the health-giving properties claimed for these fruits and vegetables I have not included those claims. I am simply noting that these fruits and vegetables appear to be consistently recommended. Nor would I suggest you pull out all those other lovely vegetables you have growing organically just because they don't appear on this list!

You'll spot lots of the "top health foods" listed in our own summer vegetable planting guide on page 31. And if you were quick enough you will have been able to get a headstart the easy way by purchasing seedlings of pumpkins, lettuce, sweet peppers and tomatoes (pictured) grown by COGS members for sale at COGS meetings or the CIT Plant Sale on 8 November.

In case you need further prompting to get out and plant these great vegetables – or to supplement your produce with purchases from our great local organic suppliers, I draw your attention to the content of the internet item *Ten Healing Foods: To Buy Organic*. In this item, a Dr Elson Haas (US-based) sets out his three guidelines on what key foods to either grow organically or buy organically produced:

- foods that are "commonly heavily treated" – for example, strawberries
- foods "where you consume the parts that are sprayed" - for example the leafy greens and the cruciferous vegetables, and
- foods "that you consume frequently" – such as apples and bananas.

Dr Haas gives some frightening information about the pesticides and quantities of pesticide normally applied in non-organic USA-based production of the foods he recommends as "healing foods" or as imported into the USA. (As well as the foods given as examples in the dot points above Dr Haas comments on the heavy use of pesticides in the

production of the other "healing foods" in his list - almonds and sunflower seeds, tomatoes and sweet peppers, tropical fruits, grapes and rice). Unfortunately it's probably a fair assumption that, apart from organically certified produce, a similar level of pesticide is applied to the fruit and vegetables he recommends that are sold here. Food for thought about food for health!

References:

S Harrar (ed), *Headlines in Women's Health 1997*, Rodale Press Inc., Pennsylvania

J Purser, *Super Charged*, article in Australian Good Taste, (Woolworths), Oct 2003

E Haas, MD, *Ten Healing Foods: To Buy Organic*, internet site Staying Healthy with Dr Elson Haas

S Heaton, *Focus on Organic Food Quality – Phytonutrients*, in Australian Organic Journal, Winter 2003, No 54, pages 8-9

Dr Bill Misner, *The Top Ten Super Foods*, internet site National Bodybuilding and Fitness Magazine

Uni of Arkansas (internet site) News Release of 2 July 2001, *Powerhouse Produce:Top Ten Nutritional Produce Picks and Why they are Good for You.*

SG Dean, *The TopTen Healthiest and Worst Foods*, for Ironmanlive.com, May 2003

Janet Popovic

COGS Backyard at Xeriscape Gardens Weston ACT

COGS Backyard is located in the Xeriscape Gardens, Heysen Street Weston alongside the CIT Horticultural School, Weston.

COGS backyard has been operating since 1998 as part of a collection of display gardens which also include a Rose Garden by the Horticultural Society, Daffodil and Dahlia Societies, Indigenous plants, No waste 2010 and worm farm displays.

Since the recent bushfires in January there has been lots of work at the gardens to rebuild and establish them for the official opening which was on 20 October 2003.

I have only recently taken on the responsibility of the garden, and with a willing band of helpers we have been able to keep the garden going and maintain it in a state suitable for display.

I would like to thank Keith, Adrienne, Alan, Janet, Beby, Catherine, Felice, Rachel, Grace, and Nicholas for their support and help to clear fire debris, mow, weed, plant, move compost, and dig beds over in preparation for planting. Without their support and help I could not have got the garden to where it is.

The garden has four main garden beds which are 4m x 4m and these are used in a 4 year crop rotation system. There are also surrounding beds which contain assorted herbs and berries. (We lost some berry bushes in the bushfires so I would like to thank the Phoenix garden regeneration group who kindly donated berry plants to replace the lost ones.)

Of the four main beds Bed 1 and Bed 2 have been planted out over spring and Bed 3 and Bed 4 are ready to be planted once the frosts are over.

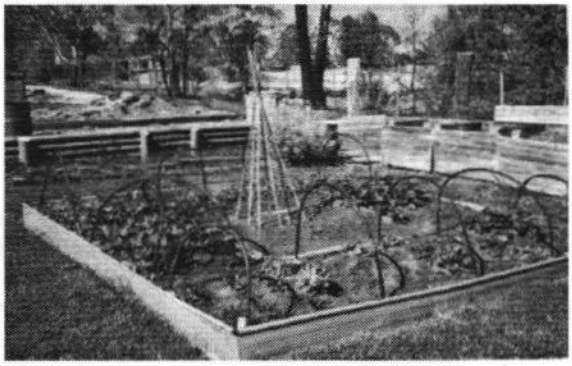
Bed 1: Broccoli, silver beet, English spinach, red and green cos lettuce, broad beans, peas and bush and climbing beans to be planted as crops finish.

Bed 2: Onions, carrots, radish, beetroot and garlic.

Bed 3: Sweet corn, cucumber, pumpkins and zucchinis.

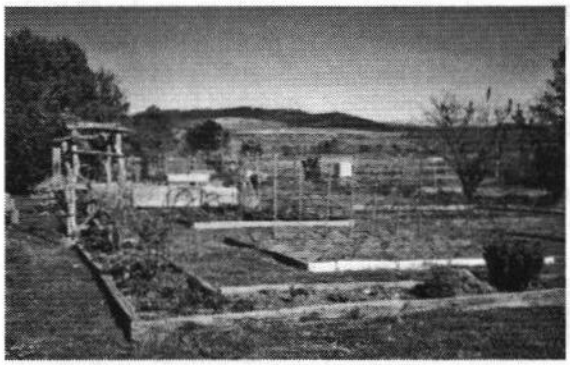
Bed 4: Tomato, capsicum. eggplant, basil, parsley.

The gardens have resident ducks and native birds and animals that cause constant damage to the gardens. Covering the beds with tunnels made of bird netting has helped protect the crops.



Bed 1—currently broccoli, silver beet, lettuce:

Bed 2 in the foreground—onions, carrots, beetroot, and prepared Bed 3 to the left:



View without pine forests! Herb and berry border, and Bed4—tomato stakes ready:

Jane Andrews

The COGS Committee says congratulations and thank you Jane!

Sea Change!

Moving to 'Yalleroo' has been a sea change for the Maurice family. A city-dwelling family of five, who has had the good fortune of living in many parts of the world and around our great country, now finds itself on *Yalleroo*—a 22 acre organic certified farm (which it has been for more than 12 years).

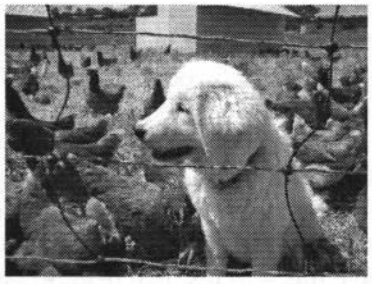
So, we have gone from having two chooks in our back yard in Hughes (four months ago) to hundreds at *Yalleroo*! Needless to say it is a steep learning curve for us, and if you could have a hidden camera on the farm, you would capture an hour of funniest home videos; including our four-year-old Sophie being given a ride on the nose of Roxy the pig, to moving chook sheds too far so that the 'girls' (who were running after their portable homes, bums in the air, little chubby legs skipping under them) could not find their sheds (no one ever said chickens were smart!) and fled the coop. They stayed out until my brother (who lives in the other house on *Yalleroo*) and I picked up all two hundred of them and took them to their new homes.

We bought day-old chicks as soon as we moved to *Yalleroo*. They are so soft and healthy looking as they have not started really pecking each other and they have just come in to lay. That was like waiting for your first baby to be born; and we kept reading the books as if that was going to make it happen sooner. The local 'real' farmers around us are bemused by our set-up as we have two alpacas with one group of chickens and a maremma puppy helping protect the other group from dreaded foxes that had been getting more than their fair share of chooks. They are both doing the trick.

We are trying our hand at lots of different things (organic) and working hard towards getting a jersey cow from one of COGS' life members so we can feed the 'girls' yoghurt so as to change their sources of protein and to fight internal parasites.

If you have an interest in visiting *Yalleroo*, please give us a call on 6236 3030 or 0438718190. We would be delighted to soak up your experiences on our new and exciting organic journey.

Catriona Maurice



Organic Gardening in Dar es Salaam

After two very enjoyable years gardening at the Mitchell Community Gardens I was offered a contract to work in Dar es Salaam for 2 years. This meshed pretty well with my thoughts for the future so we were off fairly smartly.

When choosing a place to live one of our key criteria was that we should have space to do some gardening. Frances, who was the front-person for finding accommodation pointed this out to the very pleasant realtor we were dealing with and she looked a little puzzled. She then explained that in Tanzania gardening mainly involved pointing at bits of ground and saying "Dig here!" to your local gardener.

The place we ended up with was in a compound of 6 houses and the price we paid included a proportion of the time of the compound gardener. However we were not that comfortable with the Simon Legree approach so decided to try our own luck.

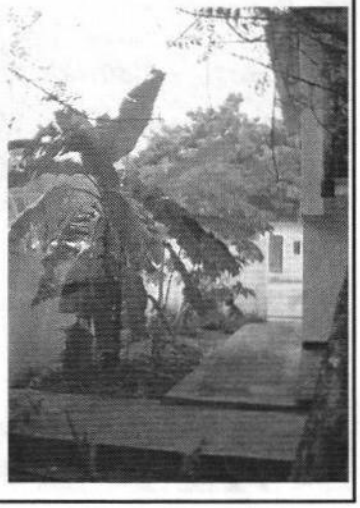
The most obvious vegetation when we arrived was a set of about 6 coconut palms, well equipped with nuts. The fronds and nuts occasionally descended with a loud thud. This ensured we stayed awake when walking under the palms but did little to solve the problem of how to get the nuts down more reliably. One of the compound guards did solve this – to his own benefit – by rounding up a linesman from the electricity company who happened to pass by with a long ladder. We were never able to repeat this process but developed fair sprinting potential to get there first when a thud was heard!

The ground (notice, not 'soil') was roughly the colour of old rust, and I suspect had much the same chemical nature. Obviously the first thing was to get a bit of organic matter in there, so we started digging small holes and dumping the kitchen scraps (mainly stones from tropical fruit – avocadoes, mangoes and papayas) in them. One of the reasons the holes were small was that a very short distance under the (c)rust one struck solid coral. The local hoe I had purchased was quite well suited to this job, but occasionally sent vibrations up the handle that loosened my fillings.

After a few weeks of this I noticed that things were growing rather briskly, so at least the local weeds liked what we were doing. In conversation with a Maasai colleague I described this and he suggested I looked closely at the weeds, since they may be more useful than I thought. Sure enough, they were mango, avocado and, particularly, papaya seedlings. After a fairly ruthless thinning out we ended up with several of each, to which we added a banana palm acquired from a roadside vendor for the equivalent of $AU3 (with a bonus feeling of smugness for having purchased this in Kiswahili). The picture top left is this bit of the garden as it looked at an early stage after planting the palm.

Fertiliser of any sort was in short supply and for a long term solution I had established a compost heap in the corner of our block. This got the benefit of the compound gardener knowing which plot in the neighbourhood – basically the Tanzanian equivalent of Yarralumla – had cows and sold the poop (many others had cows but didn't seem to sell the byproduct). A large sack cost $AU1 if the gardener was with me or $AU2 if I went on my own!

By asking around at work I found that someone knew where to buy fertiliser and was taken into the depths of Kariakoo market to acquire what was needed. This turned out to be pretty basic stuff: no 'complete' mixtures, blood and bone was unavailable and urea was reckoned to be what I needed. $AU 20 acquired a 40kgm sack and off we went. A few cups of urea were added to the compost and sprinkled on the plot generally. (After the shed got flooded at Christmas 2002 the urea formed pretty much of a solid cake so I stopped using it, but a long term resident friend took it over when we left.)



In addition to the trees we dug a small bed for use as a herb garden and with addition of compost and daily watering – the rains were pretty much failures for both

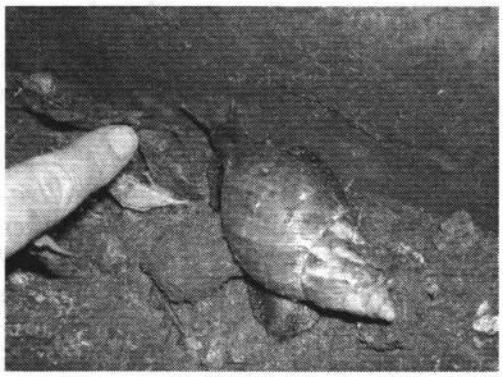
years we were in Dar – managed some good crops of basil and rocket. Zucchinis were a total failure (apparently they hate lime based rocks) and we never succeeded with tomatoes. Despite rumours that tomatoes wouldn't grow at the coast as they needed a cool spell we did see locals with crops: they said that it did get cool enough in June/July to do the job, but the secret was lots of cow manure.

About a year after planting we ended up with getting a ripe papaya (the compound guards got three before I told them we wanted some). The banana tree also produced a nice bunch, in much the same time frame, which was shared with the guards. By the time we left the tree garden had developed more than somewhat, as in the second picture on page 16.

The mangoes didn't do very well, but were surviving and growing slowly. The avocadoes were over 2 metres tall and will probably produce this year.

Other than fruit loving guards the main pests were humongous snails. The biggest in our garden had shells 10cm long, but we did find empty shells nearly twice that size. We didn't use anything particular to discourage them but they never seemed to return after being thrown over the wall onto the road! There were several sorts of fruit bats around, but they seemed not to be interested in the fruit we were growing.

Martin Butterfield



Junior Organic

Summer Projects

Make a salad box – you can keep this at home, give it to grandma or a friend or relative who can't easily garden any more, or donate it through Phoenix Garden Group to someone who lost their garden in the bushfires.

1. Find a polystyrene box (e.g. at the markets or the supermarket) – check it has drainage holes and if not, make several holes in the bottom.
2. Line the bottom of the box with a thick layer of newspaper and, if available, straw or grass clippings.
3. Mix up 3 or 4 of the following: potting mix/ loamy soil, worm castings, compost, old animal manure, blood and bone, dynamic lifter, coconut fibre brick dissolved in water.
4. Place the soil/ manure mix in the box and cover with a mulch such as hay. Water well.
5. Make holes through the mulch and plant a selection of seedlings, eg tomato (tiny varieties), lettuce – especially cut and come again varieties, chives/ shallots, rocket, silver beet, parsley, cucumber. The tomato and cucumber need to be able to trail over a side of the box or on to a trellis/ support. Water again, with a weak seaweed fertiliser or "weed tea" if available.
6. Water as permitted under the current "odds and evens" water restrictions and with cooled water left over from cooking/ washing vegetables, left-over tea and tea leaves from the pot/ tea bags, and coffee grounds from the coffee plunger.

In the pictured salad box I have made up I transplanted home-grown seedlings of tomato, parsley, shallots, a leek, several lettuce, and sowed cucumber seeds. Rather than buying punnets of these items for your salad box, see if a relative or a gardener friend has one or two spare seedlings that have self sown or are leftover from punnets of seedlings to be planted in the garden.

Reference: J French, *Backyard Self-sufficiency*, Aird Books, 1992, page 50.

Make your own seed trays

Although by this time of the year you should be able to use leftover punnets for sowing seeds of summer plants, it is useful when there is risk of frost to make up sheltered seedbeds. You can make these out of milk cartons or fruit juice containers – carefully cut out a square in one side of the milk carton or a flap in one side of the fruit juice container as pictured. Please ask an adult for help rather than risk cutting yourself! You need to leave enough planting depth below the opening. Make drainage holes in the bottom of the container. Sow the seeds in some seed raising mix. As the seedlings grow bigger you can cut away the container at the soil level, then plant out the seedlings into the garden or a pot.

Junior Organic Puzzle Page

POTTED VEGIES

TUTLTCE										
HICSEV										
LOSHALTS										
CUBREMCU										
TOMTOA										
TBERSEIVEL										
CEYLER										
RAYPSLE										
SABIL										
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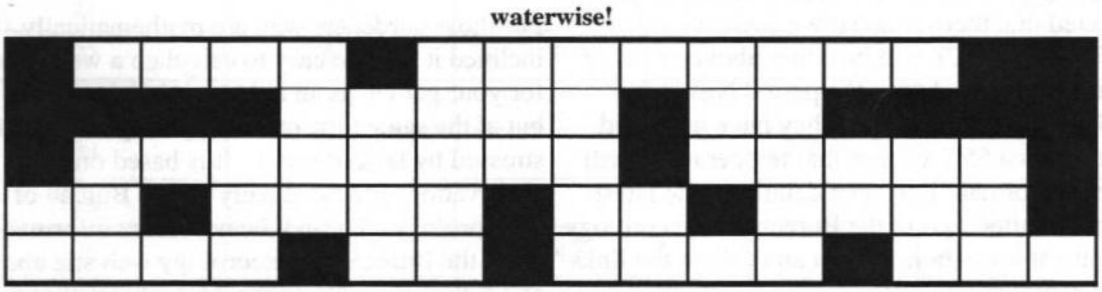
LADSA										
XOB										
LOESAS										
TOIXIGPTNM										
MAOXOBF										
WEEDATE										

___ ___ ____ _ _____ _N_ __G__ ___.

Unscramble each of the clue words and put them in the grid. Take the letters that appear in the highlighted boxes and unscramble them to find the message.

Thanks to Puzzlemaker at DiscoverySchool.com for both puzzles on this page.

waterwise!



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	r		t	e	t	i		r		e	y		d		
	d	a	s	e	r	t	e	o	b	e	n	r	l	a	
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o	s	d	v	a	a	c	n	e	n	e	a	o	a	r	y

Fallen phrase: Put the letters back in the grid to find the message about water restrictions. Letters are in the correct column but wrong order. Clue: 2nd word is "Canberra", 6th word is "early".

The Seasonal Climate Outlook – Coping with Level 3 Water Restrictions

by Keith Colls

Meteorological observations taken at Canberra Airport by the Bureau of Meteorology for the period March to October 2003 are shown in Table 1. We have been fortunate this winter that rainfall was about 20 mm above average while evaporation was close to the long term average. From a longer term perspective March rainfall was also slightly above average but April, May, September and October rainfalls were all below average. April and May were significantly below normal and this resulted in a total rainfall for the period March to October of 341.8 mm compared with the long term average of 395.5 mm. On the other hand the evaporation for the same period was 793 mm compared with the long term average of 792.9 mm. The most notable feature of the temperature recordings is that both maximum and minimum temperatures were above average throughout most of the period. However, October was the coldest for 17 years. Frosts in October and early November have caused considerable damage to frost sensitive crops.

TABLE 1: Meteorological Observations at Canberra Airport 2003. Numbers in brackets are long term averages.

	March	April	May	Winter	September	October
Rainfall (mm)	58.4 (52.6)	15.4 (49.0)	14.6 (47.5)	149.2 (129)	44.6 (52.9)	59.6 (64.5)
Mean Max Temp (°C)	23.7 (24.4)	20.2 (19.8)	17.2 (15.4)	12.7 (12.1)	16.2 (16.0)	17.5 (19.2)
Mean Min Temp(°C)	9.9 (10.7)	7.4 (6.6)	4.7 (3.1)	1.9 (0.4)	4.3 (3.1)	5.4 (6.0)
Mean daily wind run at 2 metres (km/day)	166.0 (165.0)	155.0 (143.0)	148 (156)	189.1 (177.6)	293 (228.7)	203 (210)
Evaporation (mm)	157.0 (170.4)	100.0 (107.8)	69 (68.7)	178.4 (176.2)	149.4 (111.8)	139.2 (158.0)

In spite of the winter and early spring rainfall being a little below average the sub-soil moisture, at least in the Cook garden, was quite substantial in October. Several centimetres of water seeped into a 75 cm hole dug in the ground and left overnight.

In the longer term, the Bureau of Meteorology has indicated that there is no strong indication that rainfall in the ACT will be either above or below the median value during the period November 2003 to January 2004. But they have indicated that there is a 55% chance that temperatures will be above normal. For more details on the latest seasonal outlook go to the Bureau of Meteorology web site at www.bom.gov.au and follow the links to the seasonal outlook.

These outlooks suggest that there is little likelihood of enough rain during the next few months to provide relief from the current water restrictions. Therefore, it is important that gardeners use whatever methods they can to minimise water use as much as possible. The COGS web site contains a useful handout on when to water and elsewhere in this issue there is a reprint of an paper entitled *Watering a Vegetable Garden in Canberra* presented by Richard Stirzaker at a COGS Seminar *Water-Wise Organics* in November 1994. It contains much useful practical information for gardeners.

For those gardeners who are mathematically inclined it is quite easy to calculate a water budget for your garden as an aid to minimising water use but at the same time ensuring your plants are not stressed by lack of water. It is based on observations provided daily by the Bureau of Meteorology. To find the necessary information go to the Bureau of Meteorology web site above and follow the links to the ACT observations. Alternatively, you can take your own observations of rainfall and evaporation.

The concepts underlying the following example are described in Richard Stirzaker's article, *Watering a Vegetable Garden in Canberra.*

The tomato example given in that article is applied to the October 2003, Bureau of Meteorology observations to indicate the watering that would have been necessary during October. In the cooler months all rainfall is considered to be effective at wetting the ground but in the warmer months this is not so and the first 5mm of rain is ignored. It is just a matter of accumulating the evaporation and subtracting the rain.

Table 2: Calculating a water budget—worked example

Date (October 2003)	Evaporation x 0.8 (mm)	Rain (mm)	Water (mm)	Moisture Deficit (mm)
2	1.6	24.2		0
3	2.7	4.4		0
4	2.6			-2.6
5	2.1			-4.7
6	2.7			-7.4
7	2.1	7.4		-2.1
8	3.7			-5.8
9	3.7			-9.5
10	4.8			-14.3
11	4.0			-18.3
12	4.6		Water (18.3mm)	-4.6
13	2.1	3.6		-1.1
14	3.2			-4.3
15	2.9			-7.2
16	3.5	0.2		-10.5
17	5.0			-15.5
18	4.0			-19.5
19	4.8		Water (19.5mm)	-4.8
20	4.2	6.6		-2.4
21	4.3			-6.7
22	6.5	0.4		-12.8
23	4.3			-17.1
24	3.2		Water (17.1mm)	-3.2
25	3.3			-6.5
26	4.2	4.8		-5.9
27	3.0	1.0		-7.9
28	4.3	0.8		-11.4
29	3.2	6.2		-8.4
30	3.2			-11.6
31	4.6			-16.2

This example indicates that it would have been necessary to water tomatoes on three occasions during the month, on the 12th, 19th and 24th. As an indication of how much water would have been required, an ordinary cone type spray delivers 20 to 30 mm per hour, depending on the pressure, but of course these are banned under the current water restrictions.

The above example is a particularly simplistic approach to calculating a water budget for your garden. Important factors which such calculations should take into account are: the differing water requirements of a plant at different stages of its life cycle; the different water requirements and ability to cope with water stress of different types of plants; a wider range of soil characteristics; more realistic estimates of evapotranspiration etc. A much more comprehensive set of data required for these calculations is given in the Victorian Department of Primary Industries Agriculture Note No AG0538 of October 2001 by Abdi Qassim and Bill Ashcroft entitled *Estimating vegetable crop water use with moisture-accounting method* however the principles underlying the calculations are the same. This Agriculture Note is available on the Victorian Government's Department of Primary Industries web site (http://www.dpi.vic.gov.au/dpi/index.htm) and is well worth using to make a more comprehensive and rigorous calculation of your garden water budget.

These calculations are just a guide and are not a substitute for careful observation of your plants for signs of water stress. However, it is not a simple matter to recognise the signs. The table on page 25 may be of assistance in recognising water stress.

Keith Colls

Jude Fanton: The Seed Savers' Network, Byron Bay

COGS was privileged to have Jude Fanton share some of her extensive knowledge and experience of seed saving at a special meeting on 12 August. Jude energetically covered amazing ground in the short time available – WHAT IS A SEED – LIFE CYCLE – POLLINATION – SELECTION – LABELLING – COLLECTION – CLEANING – DISTRIBUTION AND EXCHANGE – SOWING – RECORDING incl. SYNONYMS – LOCAL ADAPTATION – STRATEGIES FOR WIDER INVOLVEMENT.

Some messages were:

- eat the scrawny plants and the bolters and save the best for breeding. Watch for the biggest seeds, the most vigorous seedlings, the drought-resistant mature plants (what survived last year?!)
- old venetian blind slats and soft pencil (6B) or chinagraph are good for labelling in the garden; also painted sticks, e.g. red marker sticks for 'taboo', blue for 'water me'.
- Plants like fennel and parsley can be pulled up whole (the stem still pumps sap) and rolled in tarpaulins or hung over large fast food buckets or baskets to catch drying seed.
- Clean seed from chaff if you are exchanging seed – insects can live in the chaff; freeze seed once completely dry or store with silica gel (insects need moisture and oxygen); gel available from SSN.
- Whenever you receive seeds, test them for viability - to second leaf stage, and record the result, e.g. *October 2003, 80%.*
- Label seeds for saving – Jude gave out sample SSN foil packets printed with recommended information prompts; these can be heat sealed and resealed as smaller packets.
- Sow the seeds Jude gave out at the meeting AND SAVE SOME MORE FOR RETURN TO SSN AND FURTHER DISTRIBUTION!!!!
- Consider attending a seed savers' course – the next one is in April 2004 – note The Seed Savers' Handbook is available through SSN – see their website: www.seedsavers.net email: info@seedsavers.net

Thanks Jude – Rosemary Stevenson followed up at our September general meeting with a talk on seed exchange and networks so we are hoping for more activity in COGS on seed saving and exchange.

The Second National Organics Conference

A personal view—*Bill Hankin*

Well the OFA Adelaide National Organic Conference is over. What follows is a 'frank' personal perspective on this conference.

Soil Association had a display at the conference over the two days. The Soil Association of South Australia (SASA) did not organise this conference. It was organised by the Organic Federation of Australia. Soil Association however was a Bronze Sponsor of the Organic Conference. This sponsorship did not involve any financial contribution. SASA provided assistance with the conference organisation.

A number of SASA committee members spent a huge amount of time and effort helping to organise the conference. Among them were Cat Mills, the SASA treasurer who worked many long weeks; Jenny Patterson who helped with publicity and in editing & proof reading the conference proceedings; Rod Dyke organised the conference farm tours which took place on Saturday the 3rd of October; Tim Marshall who assisted with the program; and Richard Williams spent a huge amount of time also helping with proof reading the conference proceedings.

They all worked with enthusiasm and with enormous commitment. They deserve a very big vote of thanks by all of the SASA membership and the South Australian organic community, for their commitment & hard work especially over the past 3 months.

Other SASA members helped on occasions. We helped with a bulk mail out and put together the 'show bags' of sponsorship materials distributed to delegates. Pat & Peter Trebilcock, Paul Barndon, myself & my son Owen, spent the grand final afternoon show bagging materials while watching the AFL Grand Final. David Corkil, Richard Williams & myself were pilots on the farm tours.

There were approximately 40 presentations over the two days of the conference. But from my count only six were by organic farmers. Another two were by organic farm inspectors. The rest were presented by academics, researchers, various department of agriculture staff, or commercial sponsors. In my opinion this was unbalanced. Farmers are the heart of organics. Organic farmers started off by learning from each other not from scientists and researchers because most of them thought we were mad anyway in the early days.

Yes there are now scientists & researchers who are keen to do research into organic farming and that needs to be reported and discussed. But we also need to ensure that we can continue to learn and to celebrate and admire those who are actually doing the growing on the land: the organic farmers.

The Conference Program is the main event that people come to hear. This conference program was made up of two different types of presentations. There was a series of plenary sessions in Union Hall. And there were 'breakout' sessions or workshops which were held in four large rooms in the Union building 200 hundred meters away.

The conference plenary session was opened by a welcome speech by the South Australian Minister for Agriculture, the Hon. Paul Holloway. His speech was very positive about the future of organics in South Australia. His department is in the process of developing a strategy for developing the organic industry in South Australia. It was a warm and very welcome address.

The 'standout' best plenary session speech of the first day was made by Shane Heaton. Shane is a nutrition consultant and author. He spoke on the nutritional quality of organic food. He is an Australian researcher who has recently returned from the UK after living there for some years. He was passionate in his view that organically grown foods are nutritionally better. To support this Shane listed the significant research that has been done over the past 20 years establishing this simple fact of organic nutritional quality.

The next standout best speaker was Andre Leu from North Queensland. Andre farms an organic tropical fruit farm at Daintree. He spoke passionately and with clarity about the capacity of organic agriculture to feed the world. The simple fact is that starvation happens in this world because of poverty not because of lack of food. Andre is clearly committed not just to organic farming but to justice and equity in the world. It was an inspiring presentation.

The plenary sessions of conference had an unusual bias: there were three invited plenary speakers who spoke in favour of organic farmers adopting genetically engineered crops! They were Robyn Williams of the ABC Science Show; Nigel Scott from CSIRO Plant Industry in Adelaide and Peter Ellyard from the University of Queensland. I have attended numerous organic events over the years and this was the first time I've ever heard speakers invited to speak in favour of GE.

The use of genetically engineered organisms or crops has been banned completely in organic properties all around the world since 1991. The organic movement around the world has played a major part in the campaign against GE. Normally at organic conferences GE is discussed from the perspective of how to stop its spread and how to prevent it contaminating organic crops. This global policy has drawn enormous support

from consumers over the past decade. Large numbers of consumers all over the world don't want to eat food made from GE'd crops. So they have bought organic certified food and thus helped the organic industry to grow rapidly since that time. So to have three invited plenary speakers at this national conference telling us that we should adopt GE crops was frankly a shock to the system.

The first speaker to promote GE crops in organics was Robyn Williams in the very first session on the first day. Robyn Williams has been a supporter of GE crops for many years both via his Science show on the ABC and via other public presentations. Williams compared the organic industry's opposition to GE with the Luddites who opposed industrialisation in the UK in the 1820's.

However Williams misses out on one crucial fact: consumers of industrial products in the 1820's and 1830's wanted the new cheap products being made in the new factories. Modern consumers have clearly expressed a desire to have GE food labelled so that they can avoid it in their diet!

Robyn Williams left immediately after his talk so there was no opportunity to question, challenge, comment or discuss his remarks from the floor. He did not even stay for the morning tea break so there were no private conversations either.

The second pro GE speaker was Nigel Scott of CSIRO Plant Industry here in Adelaide. Nigel Scott is noted as a GE grape 'modifier'. Over the past decade he has developed different strains of GE'd grapes. One of these involved inserting a gene for green fluorescent protein (GFP) from jellyfish. None of these GE'd grapes have been commercialised. In fact the Australian wine industry has been very explicit stating that it will not use GE'd grape vines.

Scott spent most of his presentation talking about GE'd cotton and how it has reduced pesticide use in the cotton growing areas of Australia. However he spent no time at time at all discussing the one area where biotechnology and organics could meet. It would be a great gift to all farmers including organic growers, if new varieties of crops were bred using traditional breeding methods guided by knowledge of what specific genes code for in plants. This is the area of genomics and marker technology and does not involve any actual genetic engineering as such.

The response from the floor at the end of Nigel Scott's presentation was immediate and strong. One audience member demanded to know what a 'genetic engineer' like Nigel Scott was doing at an organic conference. He demanded that he leave immediately. Jan Denholm then intervened to request that the speaker be treated with courtesy.

The standout best speaker in this GE debate was Judy Carman. Her presentation was clear, thoughtful and detailed. At the end of her talk there was a loud round of applause from the audience.

The final speaker at this conference to speak in favour of GE was Peter Ellyard from the University of Qld. Ellyard's approach was more measured and nuanced than Scott and Williams in his support for GE. Ellyard suggested that we adopt GE crops only if it helps to avoid toxic chemicals. But he said that it should not be used to allow the development of sterilised seed (Also known as ' Terminator Technology'). Ellyard also made clear that he wants the 'precautionary principle' used. However he did not examine the moral and ethical concerns in many peoples minds. Do we have the right to go round modifying life just to suit our needs and wants ? Most organic farmers and in fact many conventional farmers are concerned about these questions also.

Since the conference ended I have thought a lot about these issues and the conference itself. The question keeps coming to mind. Why did the organisers have three 3 pro GE speakers on the plenary part of the program? The program organising committee consisted of Sid Cowling, Jan Denholm and Peter Cornish.

I asked Sid Cowling at the conference. His response was that it was to 'wake people up'. I also discussed this Organic & GE issue with Jan Denholm after the conference. Her opinion was that the campaign against GE had 'hijacked' the organic movement and industry in recent years.

The Breakout Sessions: There were four workshop sessions. These all happened after the morning tea on Thursday & Friday and after lunch on the Friday. Each workshop session had up to 4 presenters presenting in it and it was impossible to listen to all of them. So the following are just comments on those I attended. Most were well attended with up 60 people at some of the sessions.

Almost all the breakout presentations I attended were made using Power Point - high tech slide shows such as put many to sleep in earlier times. It is still easy to fall asleep. I confess I did for 20 minutes at one afternoon session on the Friday.

But among the ones I attended there were some breakout sessions which were extremely well presented and were interesting and valuable. Peter Crisp's talk on developing organic methods of controlling powdery mildew (such as milk) in grapevines was excellent. Viviene Barnet's talk on Soil Chemical trends under Organic Management at Rutherglen in Victoria was also excellent and useful.

Ross Carter, a broadacre cereals & sheep farmer from Woolsley in SA, gave what I am told was an excellent

presentation on converting to organics and the options available to the new organic farmer. Graeme & Anne Marie Brookman's talk on "Uniquely Australian Farming Systems" was also excellent with slides of their Food Forest Farm at Gawler. Garry Leeson of Organic Crop Protectants made an excellent presentation on using Trichderma to control pathenogenic fungi strains. And Graeme Stevenson from Tasmania, made an excellent presentation on how pour-on garlic drench did not control round worm in some trials he conducted on cattle. Graeme emphasised the need to report research that gave negative results just as much as positive results.

Ruth McGowan from the Victorian Department. of Primary Industries gave an interesting session reporting on a survey of organic produce grown in Victoria which was tested for the absence of chemical residues. This demonstrated that Victorian organic produce is virtually chemical free.

One talk presented raised eyebrows. This was a talk by D B Small Comparing Bio-dynamic & Conventional Dairy Farms. It reported some work done on phosphorus availability on BD farms. However all the research was done in 1990-1991 and as Cheryl Kemp pointed out, there has been considerable change in BD practices since that time. So the question needs to be asked how relevant was this research in 2003.

The Farm Tours: The best part of any organic gathering is actually getting to see how others run their properties and farms. The three tours organised to follow the conference on Saturday the 4th of October were no exception. It was good to get out of the city and see farmers working their organic lands! Rod Dyke & David Corkill led one bus of visitors North of Adelaide's Northern to the drier plains to look at an organic vegetable farm, the Wilkie Estate winery, the Food Forest managed by Graeme & Anne-Marie Brookman and to the Kalleskie organic vineyard in the Barossa Valley. It was to all accounts a good tour with many happy and tired travellers that evening. The Brookmans provided a wonderful lunch at the Food Forest and there was excellent food and wine at Wilkie Estate. It was a great day and very enjoyable!

The Adelaide Hills tour was piloted by myself. This tour visited Stirling Organic market, Paris Creek BD Dairy, the Janesce herb farm at Echunga, an organic pear and apple orchard at Lenswood and an organic apple orchard at Forest Range. It was an excellent tour with many happy organic campers returning to Adelaide that evening. Packed lunches were provided by Stirling Organic market and they were excellent.

The third tour was piloted by Richard Williams of SASA. This tour visited Temple Bruer winery at Langhorne Creek. The group then visited the Strachan farm at Sellicks Hill, Diana Olive Oil plant at Willunga and Edgehill vineyard run by Jack Bosworth in McLaren Vale. Richard Williams reports that all the group had a good time and that the wine and olive oil samples were excellent. So were the packed lunches provided by Stirling Organic Market.

Bill Hankin
President Soil Association of South Australia

Table 3: Critical growth stages for major crops

Read this table in conjunction with Keith Colls' article on coping with Level 3 water restrictions, pages 20 - 22

Crop	Critical period	Symptoms of water stress	Other considerations
Corn	Tasselling, silk stage until grain is fully formed	Curling of leaves by mid-morning, darkening colour	Needs adequate water from germination to dent stage for maximum production
Beans	Bloom and fruit set	Wilting	Yields are reduced if water short at bloom or fruit set stages
Potatoes	Tuber formation to harvest	Wilting during heat of the day	Water stress during critical period may cause cracking of tubers
Onions	Bulb formation	Wilting	Keep soil wet during bulb formation and dry near harvest
Tomatoes	After fruit set	Wilting	Wilt and leaf rolling can be caused by disease
Fruit trees	Any point during growing season	Dulling of leaf colour and drooping of growing points	Stone fruits are sensitive to water stress during last two weeks prior to harvest

From *Colorado Irrigation Guide*, Natural Resources Conservation Service.

GE NEWS

NGO's claim Canadian voluntary labelling a sham

"Voluntary labelling of GE frankenfood is a sham and is unlikely to lead to one label on one GE product in one of Canada's grocery stores," said Patrick Venditti of Greenpeace. "This is a bogus standard that has been manufactured by industry and government to avoid a proper mandatory labelling regime for GE foods." As it is voluntary, no labels on GE foods will be required. The standard also allows for products containing 5% GE material to be labelled non-GE.
Source: Agnet 8 Sept 2003

Court ruled Italy can ban GM foods

Reuters news service said the court ruled in favour of Italy over Monsanto Co., in what is expected to be another setback for biotech companies to sell their products in Europe. Although the European Parliament lifted its five-year ban on genetically modified foods in July, the court ruled Tuesday that Italy and other European countries can temporarily ban the foods if they feel there is a threat to public health or the environment.
Source: Reuters Update 9 Sept 2003 R Pomeroy

Japan says No to GM wheat

"If there is GM (genetically-modified) wheat, there is some potential for the collapse of the U.S. wheat market in Japan," said Tsutomu Shigeta, executive director of Japan's Flour Millers Association. In the year that ended March 31, Japan bought nearly 2.5 million tonnes of U.S. wheat, slightly more than half of its import needs, according to the U.S. Wheat Associates, which promotes sales of American wheat abroad.
Source: Non-GM-Farmers.com 10 Sept 2003

Spraydrift from post emergent application of Glyphosate destroying neighbouring crops

The problem is caused by Roundup herbicide or other products containing glyphosate, Roundup's active ingredient, being sprayed on soybean fields and drifting over to adjacent rice fields. It happens when rice has reached the reproductive stage and becomes sensitive to the herbicide. As rice begins to mature, some Arkansas farmers are finding symptoms of damage from Roundup herbicide drift. The damage potential is great, according to Bob Scott, weed scientist with the University of Arkansas Cooperative Extension Service. "Even low levels of drift can cause as much as a 50 percent or more yield reduction in rice," he said. Last year, the statewide average rice yield was a record 6,440 pounds per acre. "Arkansas has so much more rice than other states that we seem to have the lion's share of the drift problem," Scott noted. *10 Sept 2003*
Source: Network of Concerned Farmers
www.cropchoice.com/leadstry.asp?recid=2022

Farmers not following crop management plans to combat resistance

Mark Harris, chief of the U.S. Agriculture Department's crop statistics branch was cited as saying Wednesday that USDA found that almost 20 percent of the Midwestern farms growing a pest-resistant biotech crop have failed to comply with federal planting requirements "They don't have an incentive to penalize and fine noncompliant farmers because those farmers are their customers." *Biotech Crops Sept. 10/03 By Emily Gersema Associated Press Writer*

GM Sheep

Hundreds of genetically modified sheep bred in New Zealand by PPL Therapeutics, the Scottish company which bred Dolly the sheep, have been slaughtered because they were before their time. They had been modified to produce proteins in their milk for the manufacture of a drug called AAT, which is used to treat certain lung diseases and potentially slow the progress of cystic fibrosis. But the project has stalled since Bayer said it was putting on hold for at least three years a joint venture to develop AAT on a commercial basis. Bayer currently produces AAT using human blood as the feedstock. The 6500 strong flock is being reduced in size to contain costs. The sheep are kept on a farm near Rotorua and guarded by security guards.
Canberra Times 24 July 2003

Survey finds 5 to 1 against GM crops

The widest formal debate ever conducted in Britain has found an overwhelming number of people suspicious or outrightly hostile to the introduction of genetically modified crops. More than 650 public meetings were held around the country and about 37,000 people responded to questionnaires, with 54% saying they never want to see GM crops grown in the the UK. A further 18% said they would find the crops acceptable only if there was no risk of cross-contamination and 13% want more research. *Guardian Weekly 2 Oct 2003*

Independent Science Panel on GM

Dozens of prominent scientists from seven countries, spanning the disciplines of agroecology, agronomy, biomathematics, botany, chemical medicine, ecology, histopathology, microbial ecology, molecular genetics, nutritional biochemistry, physiology, toxicology and virology, joined forces to launch themselves as an Independent Science Panel on GM at a public conference, attended by UK environment minister Michael Meacher and 200 other participants, in London on 10 May 2003. The conference coincided with the publication of a draft report, The Case for a GM-free Sustainable World, calling for a ban on GM crops to make way for all forms of sustainable agriculture. It is a challenge to the proponents of GM to answer the case presented, rather than having to argue against the case for GM crops, which has yet to be made. This authoritative report, billed as "the strongest, most complete dossier of evidence" ever compiled on the problems and hazards of GM crops as well as the manifold benefits of sustainable agriculture, is being finalised for release 15 June 2003.*May 2003*
Source: Network of Concerned Farmers, summary of report: http//archive.greenpeace.org/geneng/

GE News pages compiled by Bridget Farrer

The True Food Guide

(How to Shop GE-Free: You can say no to genetically engineered food), 2nd Edition – 2003 has been published by Greenpeace. The booklet bases its ratings on food BRAND policy. The ratings are:

- RED (no policy to remove GE),
- ORANGE: committed to removing GE from the food chain and are in the process of doing so,
- GREEN: brands that have given written assurance that they ARE NOT USING GE. Green includes removing all ingredients derived from GE crops as well as products from animals fed GE feed.

For further information: www.truefood.org.au

GE QLD

The following note appeared in the September 2003 Newlsetter of Brisbane Organic Growers Inc.:

"The Smart State???
The Queensland Government has given the go ahead for farmers to grow GM Canola crops. We will be the only state in Australia to permit this. Others have erred on the side of caution. Even the Gene Regulator admits that this is not 100% safe."

Around the House and the Garden

Now Canberra is in stage 3 water restrictions we all need to look at better utilising this precious resource. Over the coming months I will be experimenting with different ways of watering my plot at Holder community garden to see what gives the best results. Here are a few tips to try:

- To water trees drill two holes about 30cm deep, insert a short subsoil drainage pipe, then put in dripper tubing. This sends the water down into the sub soil where it is most needed.
- Kriedemann Farm organic sugar cane mulch is slow to break down and retains moisture well.
- Where an area of the garden is not being used or is under utilised, consider building a small to medium compost heap. I find the benefits are that it cuts down on weeds, provides the soil with nutrients and saves on watering.
- Use living mulch. Last growing season at Holder I grew buckwheat on the edge of the tomatoes. This provided tiptop mulch for the tomatoes and also acted as a weed barrier. Keep a corner of the garden free so as to let the mulch go wild and every couple of weeks you have a good source for cutting and spreading elsewhere.
- Consider growing plants on pathways. Ajugas are tough and hardy plants and they also attract bees to the gardens. Other suitable plants are herbs like thyme, oregano, marjoram and chamomile.
- Do not be too neat and tidy with the garden, let it go a little wild, cut back on watering and consider using recycled water. At home we use the water collected from the showers to water the pot plants with no adverse side effects.

Why not share your tips with the community - happy gardening!

Conrad van Hest

From the Garden to the Pot

Dust off the picnic hamper—it is the time of year to enjoy the outdoors! Here are a few tempting sandwich fillings, some named to remind you of days gone by:

McEwen Earner—spread one slice of bread with alfalfa, then top with slice of ham, drained pineapple, tasty cheese and another slice of bread spread with Dijon mustard.

McMahon's Demands—drain tuna, mix with mayonnaise and paprika to taste, put this into a lettuce leaf on a slice of bread and finish with a handful of onion sprouts.

Whitlams Wonder—lightly dust chicken breast meat with Cajun spice, cook in oven and when chicken is cool cut into slices. On a slice of bread lay out snow pea sprouts, top with the chicken slices and drained sun dried tomatoes and sliced roasted capsicums.

Tortilla pocket—fill with shredded lettuce, cooked chicken slices, grated carrot, slice of Swiss cheese, tomatoes and mayonnaise.

Foccacia—top with lettuce leaf, slice of smoked salmon, shrimp (tossed in yoghurt, honey and passionfruit), cucumber and olives.

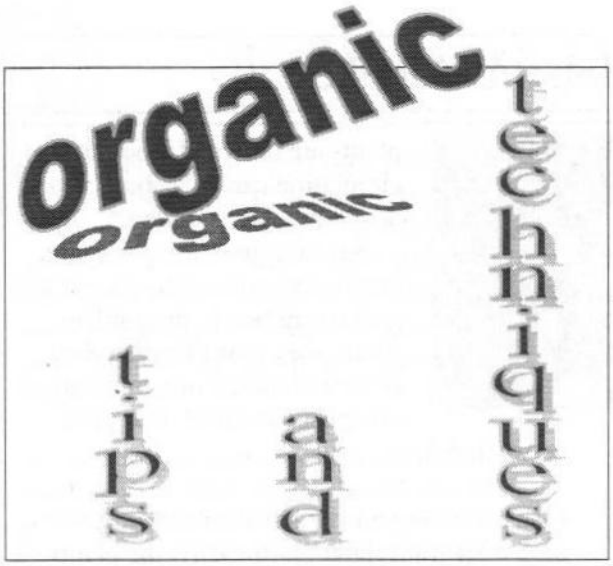
Open sandwich—top with lettuce, slice of ham, antipasto (eggplant, capsicum, zucchini, artichoke hearts roughly chopped), onion sprouts and a drizzle of tahini.

Bread roll—fill with cooked sausage cut length wise, top with a tomato salsa (diced tomato, diced red and green capsicum, finely diced Spanish onion, tomato puree, Cajun or taco spice, mixed well and seasoned to taste), slices of smoked cheddar cheese.

Frasers Folly—fill roll with lettuce leaf, lentil sprouts, tomato slices, cucumber, vintage cheese and onion sprouts.

Forde Forcer—fill roll with lettuce leaf, left over roast meat, slices of tomato, mushroom slices, red onion rings, tasty cheese. Drizzle with a light herb vinaigrette (in bowl 200ml olive oil, 50ml white vinegar, handful of dried herbs tarragon, oregano, marjoram, etc. whisk well to combine).

Conrad van Hest



How to Maintain Your Garden during Stage 3 Water Restrictions

Cedric Bryant, ActewAGL's save water ambassador, has over 35 years experience in growing and maintaining plants in Canberra. Following are Cedric's tips to help you maintain your garden during Stage 3 water restrictions.

Divide you garden into zones
By dividing your garden into zones and taking it in turns to hand water one zone at a time as per the Stage 3 water restrictions, your garden can still receive the water it needs.

When watering, water the base of the plant or shrub, not the leaves.

You may think that watering your garden zones once a week will not be enough, but by doing so you train your garden to use less water and adapt to the summer conditions.

Use mulch
Mulch saves water in your garden by keeping soil cool in summer, which reduces evaporation and prevents runoff because water that soaks into the mulch is gradually released into the soil. Mulch is inexpensive and easy to apply.

Aesthetically some mulches can look better than others. When choosing a mulch remember that any mulch is better than no mulch. The most commonly used mulches are:

- shredded lucerne (high in nitrogen and great for the garden)
- wood chips and pine bark
- raked-up shredded leaves
- pine mulch
- forest litter
- small twigs and straw
- inorganic material like gravel
- pea straw, compost and manure. Compost acts as a great mulch because worms aerate the soil to retain moisture.

The best time to apply mulch is annually during spring. Before you apply mulch make sure the ground is properly prepared by weeding, breaking up the soil and watering the area thoroughly. Remember to water as per the Stage 3 water restrictions.

It is best to apply mulch 75mm thick and keep it away from plant stems to avoid collar rot. If your garden beds are adequately mulched then watering anymore than once a week will be a waste of water.

Mulch is available at nurseries and hardware stores.

Use a wetting agent
When applied to soil, wetting agents slowly release water to the plant's root system. To ensure that the wetting agent works effectively, mix it well into the soil before applying mulch or compost.

Wetting agents can be used at any time during the year and are available in liquid or granulated form.

Choose plants that withstand drought
If you are designing a new garden, some of the best ways to save water are to select plants that withstand drought and to group plants with similar water needs.

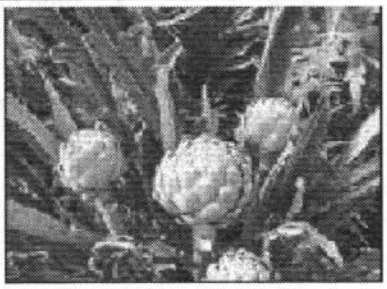
Many plants with small, grey-green, woolly, waxy or leathery leaves require less water than those with large soft leaves.

For more information on drought tolerant plants visit Xeriscape Gardens at Weston ACT (see the article on page 14 of this *Canberra Organic)*, and obtain the Xeriscape list of plants requiring less water.

Thanks to ActewAGL for supplying this information for publication.

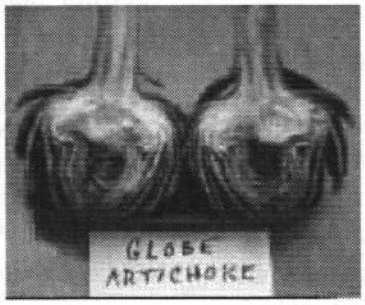
Grass Roots Oct/Nov 2003 reports a study at Auburn University Alabama that showed a weekly spraying of red pepper spray (two tablespoons of hot red pepper powder, six drops of dishwashing detergent with 4.5 litres of water, stood overnight and stirred to dissolve pepper) protected brassicas from common cabbage pests.

Plant Profile- Globe Artichokes



The Romans were one of the first cultures to become enamoured with artichokes. The globe artichoke *Cynara scolymus* is also known as French artichoke and green artichoke. It should not be confused with the Jerusalem artichoke tuber. Artichokes are native to Southern Europe where they have flourished for centuries in full sun and rich soil. Globe artichokes are prolific, perennial, thistle-like plants with edible flower buds. They are hardy and well adapted to growing in cool conditions. The flower buds arise on the terminal portion of the main stem and on lateral stems. Each unopened flower bud resembles a deep green pine cone, 75-100mm in diameter, round, but slightly elongated. Several pointed, leathery green bracts fold around a purple-blue flower. The base of each bract is the fleshy edible portion, along with the fleshy centre of the artichoke on which the flower and bracts are borne. Buds that are left on the plant open to 150 mm purple-blue flowers. These can be dried and used in floral arrangements.

Culture



Two methods of planting artichokes are available to the home gardener. Few artichokes breed true to seed so divisions are usually taken to multiply the plants, similar to starting rhubarb. These divisions or offshoots are planted about 150 mm deep so that the tops are flush with the soil surface.

Alternatively, a few varieties can be started from seed in the early spring. They do need to be started early, 8-10 weeks before the last frost. The seeds take a while to germinate so use a good quality potting mix to prevent the seeds from rotting. After the first true leaves have developed, the seedling can be potted up. Feed with liquid manure at ¼ strength every 2 weeks.

Spacing is critical for these plants. A full grown plant has a diameter of 2 metres so to ensure that the plants aren't too crowded, they should be spaced at least 1.5 metres apart. If plants are crowded, poor air circulation can contribute to the development of mildews.

Because these are perennial plants, they should be placed in a permanent bed in the garden where they won't be disturbed. Before planting, mix in plenty of compost and check that pH is between 6-8.

Plants will begin to produce chokes 90-100 days after transplanting. Initially, the plants will send up just 1 or 2 flower stalks. However, a well-established plant will provide up to 12 chokes in subsequent years and will keep producing for 4-7 years. A small family only requires 3 or 4 plants.

Pests

Few pests bother artichokes. Aphids can be a problem but the leaves are sturdy and will withstand a strong jet of water. Leaf miners can be active in the early spring but they rarely damage the plant severely. Hand squishing manages these pests effectively.

Harvest

As the buds begin to develop, keep an eye on them so that you can harvest them at the ideal time: at good size but before the bracts begin to open. If left too late, the buds will become tough and woody. Cut the top one first, then the secondary ones as they mature. Cut the buds with about 50 mm of stem attached. Artichoke stems also have a similar flavour to the buds so don't throw these out! After harvest, cut back the flower stems to the ground and apply a good layer of compost to encourage another flush of shoots. Store at low temperatures (near 0°C) and high humidity (95% RH). In addition to minerals and vitamins, artichokes contain about 3% protein and 0.2% fat.

References: plantsdatabase.com
ucdavis.com

Article contributed by **Stephen Dean**

SUMMER VEGETABLE PLANTING GUIDE

In Summer it is a good idea to mulch your garden beds to help keep the soil cool and moist. One experiment has shown that a 4cm layer of straw reduced evaporation by 73%. Be careful however not to lay down a thick layer of sawdust or lawn clippings that can pack down to form an impenetrable barrier to water.

Soil with lots of compost will contain all the nutrients your plants need for strong, healthy growth. In addition it will retain water and act like a sponge to keep your plants moist through the dry summer days.

On days of extreme temperatures your plants may need to be physically protected from the heat. This can be achieved by covering the plants with shade cloth secured on a frame eg weldmesh bent over to form a tunnel (secure the shadecloth with some pegs).

Try not to water the leaves of plants that are susceptible to fungal diseases eg tomatoes, cucumbers, pumpkins, zucchinis. Water with drippers, fill pots sunk into the soil near the plants, or if you must use overhead sprinklers, water in the cool of the morning so the water can evaporate during the day.

Keep those weeds down. They compete with your plants for food, water and sunlight. It is best to tackle them when they are small - before removing them becomes an exhausting exercise.

Pests can multiply over summer. Don't reach for the pesticides. Observe if there are natural predators present, remembering that there will be a delay between the appearance of the pest and the subsequent build-up of its predators. If you must spray, use an environmentally benign spray. Read books such as Jackie French's *Natural Pest Control.*

Make sure you harvest your crop regularly - in most cases this will encourage your plants to continue cropping and you get to eat your produce at its peak.

Remember to leave space in your vegie patch for those winter vegetables that must be planted in late summer - early autumn. Brassicas and other winter crops need time to mature before the extreme cold of winter sets in.

Summer Vegetable Planting Guide

	DEC	JAN	FEB
French Beans	**S**	**S**	
Beetroot	**S**	**S**	**S**
Broccoli	**ST**	**ST**	**T**
Brussels Sprouts	**ST**	**ST**	**T**
Cabbage	**ST**	**ST**	**T**
Cauliflower	**ST**	**ST**	**T**
Carrots	**S**	**S**	**S**
Celery	**T**	**T**	**S**
Chicory	**S**	**S**	**S**
Chinese Cabbage	**S**	**S**	
Cucumber	**ST**	**T**	
Endive	**S**	**S**	**S**
Kohl Rabi	**ST**	**ST**	**T**
Leeks	**S**	**S**	
Lettuce	**ST**	**ST**	**ST**
Marrows	**T**		
Parsnips	**S**	**S**	**S**
Potatoes	**S**	**S**	
Radish	**S**	**S**	**S**
Silver Beet	**ST**	**ST**	**T**
Squash	**ST**		
Swedes		**S**	**S**
Sweet Corn	**ST**	**T**	
Tomatoes	**T**	**T**	
Turnips		**S**	**S**

S = Seed Sowing
T = Transplanting

This table is a guide only, please observe the seasonal weather patterns before deciding when to plant, as there will often be distinct differences in summer weather from one year to the next.

Planting times will vary for different varieties of the one vegetable eg. December plantings of heading lettuce should be successful; February plantings should be the butterhead varieties.

Canberra Organic Quick Quiz

Test your seed saving knowledge

1. Can plants of the same genus but different species cross pollinate?
2. Name the three ways that vegetable flowers are pollinated.
3. How are the following vegetables pollinated:-
   a) Beetroot
   b) Beans
   c) Broccoli
   d) Tomato
4. Can the following vegetables cross with each other:-
   a) Onions and Leeks
   b) Silverbeet and Beetroot
   c) Spinach and Silverbeet

Answers are on page 35. Too easy? Send your own quiz and answers for possible publication to editor@cogs asn au

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Email **info@cogs.asn.au** or visit our website at **www.cogs.asn.au**

COGS monthly meetings are held on the **4th Tuesday** of each month (except December and January) at **7:30pm** in **Room 4** of the **Griffin Centre** in **Civic**

Visitors Welcome

Canberra Organic Growers Society Inc.

INFORMATION

GENERAL INFORMATION

The Canberra Organic Growers Society is a non-profit organisation started in 1977 with the aim of providing a forum for organic growers to exchange information and encourage the adoption of organic growing methods. COGS is an association without specific political or religious affiliation as a group. COGS has the following objectives – to:

- Foster the use of organic methods in home gardening, horticulture and agriculture
- Foster organic agricultural knowledge
- Promote the production and consumption of certified organically grown foods and the adoption of recognised organic standards
- Demonstrate and encourage the use of organic growing techniques
- Provide a forum for the discussion of matters of interest to organic growers in the ACT and surrounding region
- Facilitate the exchange of information and ideas between members and with other organic growers
- Assist members in establishing their own organic growing areas
- Administer community gardens operated under organic agricultural principles for recreational, educational or rehabilitation purposes and for the self-supply of contaminant free produce.

ADMINISTRATION

COGS is run by a voluntary committee which is elected annually at the AGM in March. The committee meets monthly and all members are encouraged to consider participating in the work of the committee.

MONTHLY MEETINGS

Meetings of members are held in Room 4 at the Griffin Centre, Civic, at 7.30 pm on the fourth Tuesday of the month (except in December and January). Each month there is a guest speaker. Recent meeting topics have included Backyard poultry keeping, Worms, Herbs and Seed Saving. At the meetings there is a produce and seed exchange table and a bookstall. COGS seeds and seedlings are also available for purchase. Members may also borrow two items from the COGS library. A light supper is available after the meeting.

Visitors are welcome.

QUARTERLY MAGAZINE

Canberra Organic, the quarterly publication of COGS, contains articles on organic growing, informs members of upcoming speakers and events, and includes planting and growing information specifically for the Canberra region. Members are encouraged to contribute articles.

COMMUNITY GARDENS

COGS currently operates 11 community gardens in the Canberra region. Gardens are located at Charnwood, Cook, Curtin (Cotter Garden), Dickson, Erindale, Holder, Kambah, Mitchell (Northside Garden), Oaks Estate, Queanbeyan and Theodore. Members may obtain plots to grow organic produce for home consumption. These gardens provide a wonderful opportunity for people to garden with other organic growers, to share their expertise and learn something new at the same time. Plot holders are required to pay an annual levy to cover the cost of water, insurance, tools and maintenance. The ACT Government has supported the establishment of these gardens through the ACT Office of Sport and Recreation and the Department of Urban Services Community Renewal program.

INTERNET

COGS maintains a web site devoted to organic growing at www.cogs.asn.au. The site contains the COGS information papers on organic growing, seasonal planting guides, certification information, a page for children and links to related organisations and information sources.

OTHER ACTIVITIES

From time to time COGS organises other activities for its members. For example, we participate in the World Environment Day fair and arrange information days at "COGS Backyard". Seminars and workshops are also conducted.

CONTACT
COGS
PO Box 347
DICKSON ACT 2602
Phone: (02) 6248 8004
Email:info@cogs.asn.au
Web: www.cogs.asn.au

COGS NOTICE BOARD

SPEAKERS

Room 4, Griffin Centre, Civic, 7:30 pm

November 25
Barbara Schreiner
Plant Propagation

Note: COGS general meetings are not held in December or January.

February 24, 2004
to be advised

Horticultural Society of Canberra Inc. Spring Bulb and Camellia Show, 13-14 September.

Congratulations to successful COGS exhibitors:

Graeme Davis
Winner of Grand Champion daffodil

Winner of Reserve Champion daffodil

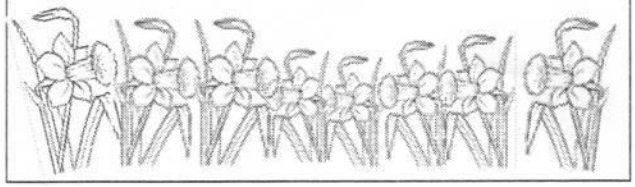
Winner of Champion Divisions 1, 2 and 3 type daffodils

Winner of ACT Daffodil Championship

Winner of Canberra Gardener Daffodil Championship

Winner of Jackson's Daffodils Perpetual Trophy and Prize

Bronwyn Beechey
2nd prize for three containers of cut flowers



ROCKS Development Project

The *Draft City West Masterplan* was released by Simon Corbell MLA on 17 September 2003. The plan outlines a vision for City West and a planning framework for the area. Community facility provision, siting and timing is addressed in the Draft Masterplan and will have several important implications for:

* ROCKS groups (includes COGS)
* community organisations requiring community facilities in the future.

Responses are due by 9 December 2003.
Further information: Phone 6248 5348, email: rocks@ecoaction.net.au

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Native Plants Sale for Pat Treacy Memorial Wildlife Refuge, Collector

Kangaroo Paws, Brachycombes, Bottlebrushes, Correas, Croweas, Grevilleas, Tea Tree, Melaleucas, Wax Flowers (Eriostemons), Mint bushes, Westringias and Native grasses $5, $2.50

Contact:
Phone 6241 9303 (h) or 6289 7487 (w)
or
Email francis.ross@health.gov.au

All proceeds used for the setting up of the wildlife refuge.

Propagation—Do you have a mouth-watering fruit or berry which you would like to share? Please contact me for inclusion on our database.
Robert Rider, rbr@webone.com.au, ph 62861137.

Phoenix Garden Group Contacts:
Chris Stamford ph 62884049
Lesley Pattinson ph 6288 0293

Canberra Organic Quick Quiz Answers

1) No
2) Self-pollination, insects, wind
3) a) Wind b) Self pollinated c) Insects
d) Self but can also be insects
4) a) No b) Yes c) No

Junior Organic Solutions

You can grow a salad and veggie box

Save Canberra water by watering early or late on your odds or even day