

THE COGS

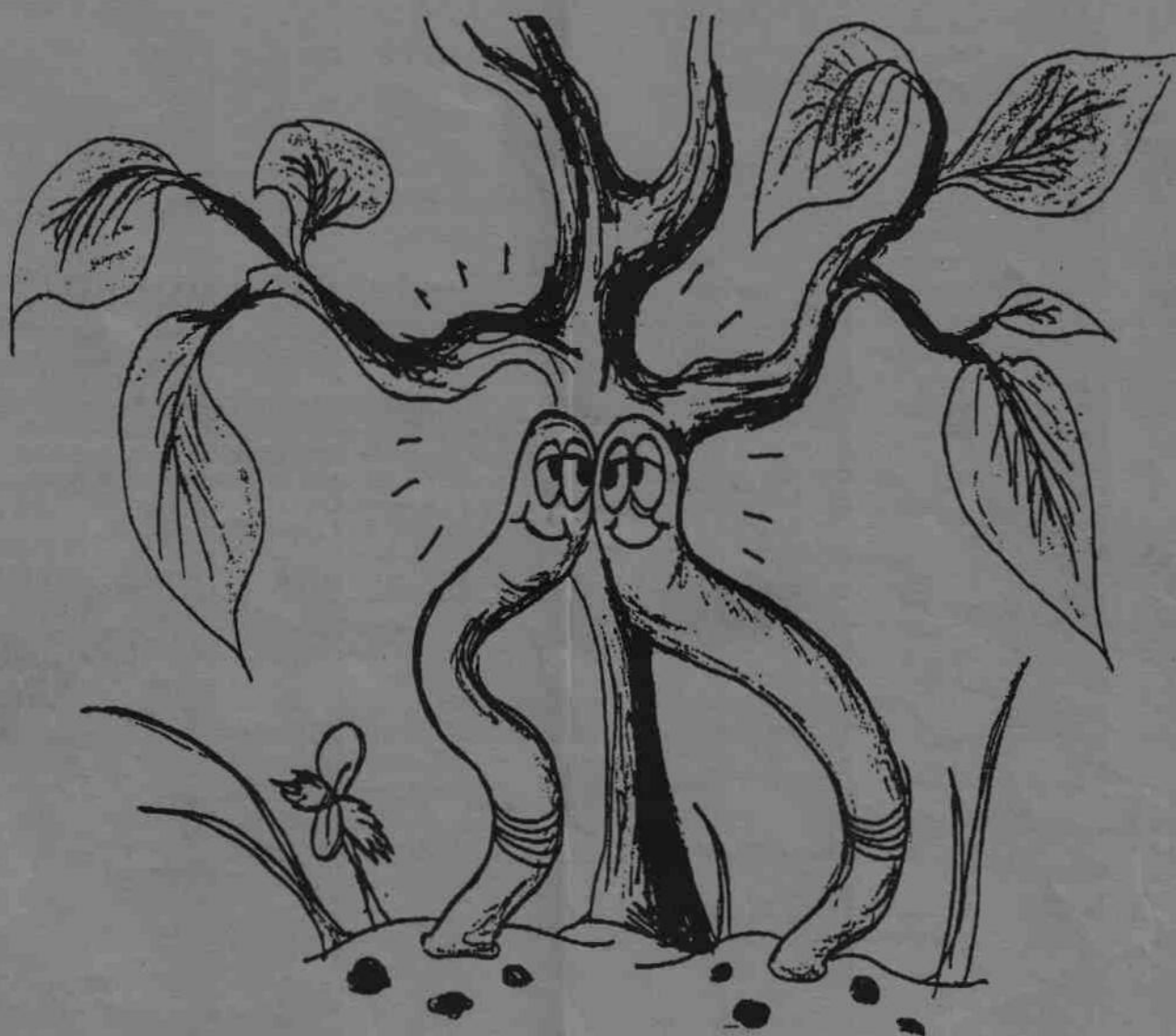


QUARTERLY

VOL 2 no. 3

ORGANIC GROWING IN THE CANBERRA REGION

SPRING 1994



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WHAT IS ORGANIC GROWING ABOUT?

The ORGANIC MOVEMENT endeavours to provide an alternative to the mass of toxic chemicals, fertilisers, fungicides and herbicides used in modern agricultural methods by utilising more natural means of improving and preserving our soils and to produce nutritious, less contaminated food.

WHAT ARE THE ORGANIC ALTERNATIVES?

By enriching the soil with compost, manure, green manure and mulches we avoid disease and control pests through non-chemical methods, including encouraging the presence of beneficial insects to feed on pests, growing companion plants to discourage pest attacks, by growing healthy plants to resist pest attacks and disease and by tuning in to nature with love, harmony and gratitude.

REMEMBER: Monthly meetings are on the 4th Tuesday of the month.

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NEWS BRIEFS...

by Michelle Johnson

THE GRASSLANDS CONFERENCE

I have just read the proceedings of the 9th Annual Conference of the Grassland Society of NSW Inc. called "Putting the Farm under the Microscope".

It was interesting to see the range of topics covered - for example:

The first paper, "Pasture Management Effects on Soil Biota", looked at the importance of soil organisms in the sustainability of grazing systems.

The second paper, "Litter as a factor affecting the balance between grass, clover and weeds", looked at the effects of allelochemicals released from litter that can adversely affect legumes and weeds. Perhaps one day the scientific community will take more notice of the organic growers use of companion planting!

Certainly the impression I have from this conference is that the scientific and farming community are starting to look at issues such as these with a more open mind than before - forced to doubtlessly by the crisis in the rural industry.

Some interesting papers dealt with issues such as weed control by pasture management rather than spraying, and use of sewage ash and sludge as fertilisers. Summaries of these are presented below:

Yorkshire Fog

An example of a well thought-out approach to weed control was demonstrated in the paper "Yorkshire Fog, Friend or Foe? - A Farmer's Perspective" by Robert Lance from "Stillwater" via Collector (p 82 of Proceedings).

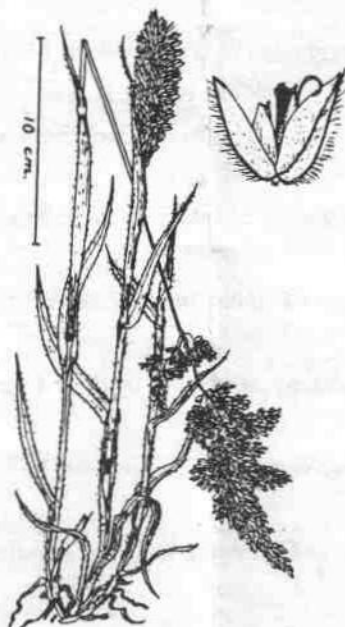
Yorkshire Fog is a weed from Europe growing from autumn to early summer. It seeds prolifically and thus spreads rapidly following environmental destabilisation (such as over- or under- grazing). This weed has become the dominant

species on over 80 ha of Robert Lance's better land and is still spreading.

The usual approach to try and eliminate this weed is applications of Roundup or Gramoxone, but this is expensive and not always effective. What Robert Lance has found is that cattle will graze Yorkshire Fog (provided they have little choice), as will sheep, provided again that they are given little choice, and if it is kept short and green.

It has been shown to provide adequate levels of nutrition as long as it is slashed before flowering. It also makes quite good quality silage, and another farmer, John Dixon, has carried out some research on this topic (p 48 of Proceedings).

Perhaps here we have an example of Bill Mollison's saying "The Problem is the Solution"!



YORKSHIRE FOG

adapted from drawing in "Flora of the ACT"
by N Burbidge and M Gray

Sewage Ash and Sludge

A paper by Peter Simpson, NSW Agriculture, Goulburn, "Beneficial Use of Waste Materials" (p 54 of Proceedings) reported on research into the use Canberra sewage ash and Sydney sewage sludge. He says, "Public awareness of organic fertilisers as a nutrient resource has been increasing in recent times. In a country with some of the world's oldest and poorest soils, this is an important awakening. With 80% of Australians living in towns and cities, and as a major exporter of agricultural products, we cannot persist in tipping this potentially valuable commodity into oceans and landfills."

Ash is produced at temperatures above 650°C and is therefore sterile. It contains no organic matter or nitrogenous fertiliser, but it has potential as a source of lime and phosphorous.

His main conclusions were:-

1. the economic transport limit is about 120km from Canberra, comparing the use of and cost of ash to that of lime.
2. the product is fine and difficult to handle, and contains little sulphur. They are looking at blending it with other organic materials to overcome these problems.
3. Further research will be carried out on the significance of heavy metals.

Since 1992 NSW Agriculture has been working with the Sydney Water Board on the use of sewage sludge in agriculture. Part of the project is a research site at Boxer's Creek near Goulburn where the effect of dewatered sludge on soil, pasture, livestock and water systems is being measured for six years commencing in 1992. Thus far guidelines for heavy metals and pesticides in the soil have not been exceeded.

TOMATO YIELD TRIALS

In 1994, The Diggers Club, at their Seymour Farm in Victoria, carried out trials of 10 varieties of tomatoes. The yield per plant was calculated, and the time to the first fruit picked.

The three highest yielding varieties were Mortgage Lifter, Green Zebra and Grosse Lisse, with yields of 14.5kg, 13.6kg, and 13.3kg of fruit per plant.

The first two are heirloom tomatoes, and since Grosse Lisse dates from last century it too is strictly speaking

an heirloom variety. These varieties took 97, 96 and 104 days to 1st fruit respectively. Two popular F1 hybrids, Mighty Red and Apollo yielded 12.9kg, and 10.9kg of fruit per plant respectively, although Apollo only took 75 days to first fruit.

Source: *Digger's Seed Annual*, 1994, p3

The Diggers Club continues to offer a wide range of heirloom tomatoes this year, so if your feeling

adventurous have a look at their catalogue (available for perusal at the COGS Seed Exchange). As a paste tomato, as well as a nice salad tomato, I can recommend *Amish Paste*, a excellent tasting firm tomato with few seeds that I grew last year.

This coming season I can't resist growing *Principe Borghese*, a variety Diggers recommend as a drying tomato.

BLOOD AND BONE: WHAT'S IN IT?

For organic gardeners blood and bone is one of the most popular organic fertilisers, but disturbing reports lately have raised questions as to the composition of so-called commercial "blood and bone" products on the market. The popular TV show "Burke's Backyard" recently ran a segment in which they tested 6 leading brands of blood and bone. The results are staggering!

To make sure I was got the facts straight, I sent away to Burke's Backyard for their Fact Sheet on this segment, and the following information is taken from that sheet including direct extracts, shown by ("), reprinted with their kind permission:

"Burke's Backyard commissioned a number of experts to conduct exhaustive tests on six of the most widely available brands of blood and bone in Australia. The results were surprising - only 2 of the products contained adequate amounts of blood and bone. Four of the products tested were unsatisfactory, and three of these contained little or no blood and bone at all.

The following products were tested:

1. Yates Blood and Bone
2. Pivot Blood and Bone
3. Paton's Blood and Bone

4. Defender Blood and Bone

5. Sherrington's Blood and Bone (packaged by Brunings and also sold as Cole's Country Garden Blood & Bone) =

6. Nitrosol Complete Organic Fertiliser (labelled as 'Traditional Blood 'n' Bone')

These products were tested by the Australian Government Analytical Laboratories, the Department of Agriculture in NSW and a Forensic Biologist, Derryck Klarkowski, who was able to test for the presence of blood in the samples. This was clearly an expensive and comprehensive testing program for "Burke's Backyard" to carry out!

The results were as follows:

"1. Two of the products, Pivot and Yates, were found to be superior to the rest. These were substantially if not wholly blood and bone products.

"2. The Paton's fertiliser was substantially blood and bone but had some inclusions.

"3. The Nitrosol product contained no blood and bone at all and also contained inorganic or chemical fertiliser in the form of potassium chloride and super-phosphate. Although clearly labelled as 'Traditional Blood 'n' Bone', this product was not blood and bone in

any way.

"4. The Defender product contained substantial quantities of blood and bone but shows evidence of other organic inclusions. These could be poultry manure, wool scourings, sewage sludge, feather meal or other animal by-products. Phosphate levels were fortified, possibly with rock phosphate or super-phosphate.

"5. The Sherrington's product was also clearly labelled as blood and bone but in fact contained only a minor proportion of blood and bone. This product was thought to also contain super-phosphate in considerable amounts and some kind of wool scourings, dags or possibly sewage sludge although this was not certain."

So, the only products that Burke's Backyard recommends are the Yates and Pivot brands. Yates does contain one impurity, but that is rock phosphate which is an allowable organic input.

The question remains however as to why the other brands are allowed to be marketed as blood and bone. Apparently the NSW Department of Agriculture does have the power to remove these products from the market. Perhaps now with the publicity given to it by "Burke's Backyard" they may feel forced to act.

Organic Certification

Reprint of an article by Sam Elliott in Going Organic (Apr-June 1994), following a meeting in Lismore of the Tweed Richmond Organic Producers Organisation (TROPO) attended by representatives of three certification bodies.

Organic farming in Australia is currently complicated by the existence of more than five different certification bodies, responsible for setting the rules under which food you buy can legally be labelled "organic".

The oldest of the certification bodies is NASAA (not the famous US space agency NASA, even though pronounced the same way). NASAA stands for the **National Association for Sustainable Agriculture, Australia Ltd.**, and it was founded in 1986. It grew out of the first attempt at a certification process in the 1970s by the Soil Association of South Australia.

Tim Marshall, the first chairman of NASAA and a board member since its inception, represented NASAA at the TROPO meeting, along with its local certification inspector, Bryan Peterson of Mullumbimby. Tim is also a member of the federal government's **Organic Produce Advisory Committee**, or OPAC, so has great experience at all levels of the political processes controlling the organic industry.

NASAA is a member of the **International Federation of Organic Agriculture Movements (IFOAM)** whose mission on the planet is to ensure that organic certification schemes in different member countries are equivalent, thus facilitating international trade in organic produce.

The **Biological Farmers of Australia (BFA)** was formed in 1987, and was represented at the meeting by Tom Hackett of Bonville, a director and inspector. The BFA has a beautiful logo of a growing seed, something NASAA sorely lacks, and BFA certified growers are entitled to label their produce with this symbol.



Many BFA members are also Bio-dynamic farmers, following the agricultural practices laid down by Rudolf Steiner in the 1920s. Some of these practices are esoteric in nature, and there are at least two other certification bodies which exclusively certify practitioners of Bio-dynamic agriculture.

The **Organic Herb Growers of Australia Inc. (OHGA)** started out in 1986 as a local group of North Coast organic herb growers, and gradually extended its scope to incorporate organic herb growers all over the country. It now has over 70 certified herb farms, and a full time inspector. OHGA was represented by its founder, Howard Rubin of Alstonville, who proved a very eloquent speaker on the problems of small holdings and the herb industry's requirements.

Need for a United Voice

The most pressing need in Australia at the moment is for a

single united voice representing the emerging organic industry.

Last year an attempt was made by the various certification bodies to form an umbrella organisation or "peak body" as Tim Marshall aptly described it, but the attempt foundered on internal faction fighting.

There is hope for the consumer yet, however, and it comes from the direction of OPAC. OPAC has established a national standard for exportable organic produce, administered by the **Australian Quarantine and Inspection Service (AQIS)**, and the various certification bodies must be annually accredited by AQIS if their certified members wish to export genuine organic produce.

Moreover, on the domestic front, the **National Food Authority** is expected to introduce a national food labelling Act whereby "organic" will only mean "certified by an accredited body", so that the export standards will be applied to the food we eat at home.

When that happens, the various certifying bodies may need to amalgamate in order to save passing on to their already financially overburdened members the extra costs of the new Federal accreditation schemes.

Environmental Aspects

Enough of all these acronyms! The emphasis of all the certification schemes is the farm as a biological organism, a closed ecosystem practising sustainable farming methods, be they derived from Steiner's mysticism or Bill Mollison's permacultural radicalism.

In many ways the organic movement would gain more political clout if it allied itself with the environmental movement, rather than attempting rapprochement with the conventional agricultural mainstream.

Regardless of the superior quality of organic produce, it is its low environmental impact and its sustainable practices which distinguish it from conventional chemical agriculture. It is these aspects which will increasingly appeal to the sophisticated urban consumer, who is largely unaware of what really happens out here in the country where the food is grown.

How Certification is Done

Turning to the practicalities of certification, Bryan Peterson vividly portrayed the methods he uses to inspect NASAA growers: starting from a discussion, over a cup of tea, of the 12-page NASAA application form, complete with detailed farm map.

This leads on to the site inspection, a rambling walk over the areas to be certified, including soil sampling for pesticide residues at appropriate hot spots, like old potato patches or banana fields; and concludes with his report to the NASAA review committee, who decide what level of certification is appropriate to the grower and the farm.

Grower and Farm

It is most important to note that the certification covers both grower and farm and is non-transferable on sale of the property. This goes back to the underlying philosophy: the organic farming practices are inseparable from the farmer and the farm, and cannot be guaranteed under new ownership. Most growers are first certified at Level B, or Conversion Level, and this is upgraded to Level A, or Fully Organic, only after three years of farming at the equivalent of level B. Certification costs vary from under \$200 for OHGA, to \$300 for a small BFA or NASAA organic farm, and up to \$700 for a large commercial organic farm under NASAA.

The small number of fully certified growers at the meeting were critical of the complexity of the re-inspection procedures, soon to become an annual event for all certifying bodies. NASAA requires the whole 12 page rigmarole to be repeated biennially, forcing its growers to fully document their growing techniques, inputs and outputs, marketing etc.. Some farm consultants would regard this as proper management technique anyway, but it is still unusual in the farming world and most farmers regard it as an onerous duty. Bryan Peterson tried to put it in perspective, by describing how useful the re-inspection reports are to inspectors, who may never have visited the property before, especially in conjunction with the previous inspector's report. And of course it is essential to guarantee to the consumer that the sustainable organic practices are continuing on the farm.

Editor's note: The BFA Quarterly Journal (June 1994) reports that the Boards of Directors of BFA and NASAA met in May to discuss closer cooperation between the bodies. Topics of discussion included reciprocity of certification, the proposed umbrella body (the Australian Organic Agricultural Commission), relationships with AQIS, and sharing of resources and information.

Organic Certification Organisations

The organisations listed are all the certification bodies we are currently aware of. We would welcome further information on these or other certification bodies.

Biological Farmers of Australia
G.P.O. Box 2577, Canberra City, A.C.T. 2601
Ph: (085) 285 337, Fax: (085) 285 335

Biodynamic Agricultural Association of Australia
c/o Post Office, Powelltown, Vic. 3797

National Association for Sustainable Agriculture, Australia
P.O. Box 768, Stirling, S.A. 5152
Ph: (08) 370 8455, Fax: (08) 370 8381

Organic Herb Growers of Australia
P.O. Box 6171, South Lismore, N.S.W. 2480
Ph: (066) 29 1057

Organic Small Growers of Australia
RMB 1552, Benalla, Vic. 3673
Ph: (057) 68 2477

Health Script International
Ph: (09) 383 7166

Organic Vignerons Association of Australia
P.O. Box 385, Griffith, N.S.W. 2680
Ph: (069) 62 3944

News From the Organic Producers Council of NSW & the ACT Inc.

by *Joyce Wilkie* (ph 06 236 8173 evenings)

For the most part only the two COGS delegates attend the OPC meetings at the University of Western Sydney, Hawkesbury campus. However, the August meeting will be different from usual. Kate Short, author of the book *Quick Poison Slow Poison*, will be giving a talk on pesticides and other chemicals. This will be followed by a talk by Gil Wahlquist, an organic wine maker. If you are interested in hearing either of these speakers the trip to Sydney will be well worth the effort (see p. 11 for details).

The main challenge for OPC at the moment is promoting organics. Three groups are being targeted: - growers need to be encouraged to change to organic methods; consumers have to be encouraged to buy more organic produce; and children have to be taught about more sustainable ways of both growing food and consuming it. The OPC has managed to secure some money for the design and production of posters. These are under way and should be available to COGS to use at field days and market stands in the next few months. There will be a small brochure supplied with each poster explaining in detail the issue the poster addresses.

With regard to education, the Gundaroo Public School Vegetable Growing Project has now been fully completed and the write up of this pilot project is now available from the OPC for a cost of \$8 (postage paid). This document is being compiled together with a lot more resource material and general information about organic food and organic production. The idea is to have a package that is freely available to anyone who would like to visit a school to introduce the topic of organic growing to the students. It will also be useful for any teacher or parent who would like to start a small vegetable and/or flower garden at a primary or secondary school.

OPC decided to offer a prize to students of horticulture or agriculture at the University of Western Sydney in memory of Mike Lubke and Dot McNeill. The details of arranging this prize are just about completed and it is hoped that it will encourage students to think about organic methods as a viable farming option.

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Getting Macgregor Primary's No-Dig Garden "Off the Ground"

by Emma White

In Spring 1993, a no-dig garden project was launched for and by Macgregor Primary School. Rhondda Hoffman and Kay White, both keen gardeners at the school, began the project to give students hands on experience in sustainable gardening and to extend the school's existing recycling program. Aptly named 'The Recycle and Grow Project', the garden fitted perfectly into the aims and objectives set by the ACT Education Department for environmental and science education.

The momentum for the garden came from the success of the previous year's World Environment Day project. Pupils had bred earthworms in the classroom and learnt about their role in ecology. By the end of 1992, a worm farm had been established to recycle pupils' food scraps. The new school garden provided a place to use the castings and seemed to be the next step in building on what the students had already learnt.

Before it could get started, however, an appropriate location had to be found. Initially, this was a problem because the most secure sites were too small, shady or cemented. The most suitable place, tucked between school buildings and a row of native shrubs, would require considerable funding to make the area habitable for a garden.



With the support of the Principal and staff of the school, the two teachers applied for an ACT Department of Education funding grant to establish a no-dig garden on the school grounds. Happily, the grant was awarded, but it unfortunately fell short of the two thousand dollars that the school had asked for. However, with strong support from local businesses and Macgregor Primary P&C, the five hundred dollars allotted was increased to five times as much, in donated supplies and additional funding. This allowed the project to continue and building on the site commenced.

A six foot wire fence and gate was generously donated and was erected by seemingly tireless parents and teachers on a

weekend working bee. On a second weekend, paving was put in, followed by compost bins, (made from donated timber) on subsequent weekends.

No-dig plots were set up by classes using manure, lucerne, blood and bone, newspaper, compost, earthworm castings and soil. Seven plots in all were established, one for each year level. Teachers and students planned and planted the first season's crop in Spring 1993. The crops planted were carefully considered, as their growth cycles had to fit in with the school year and also had to be of interest to the students.

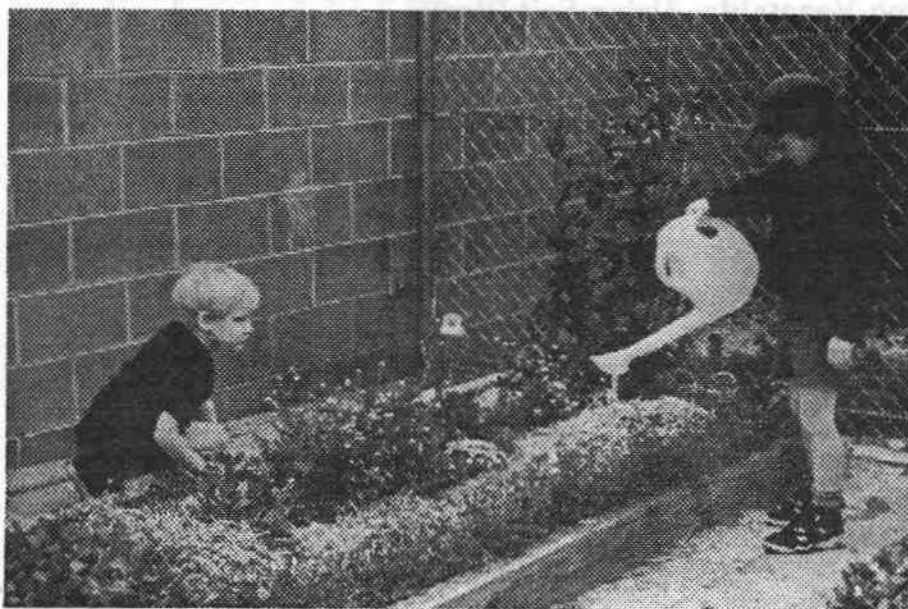
Plantings included forget-me-nots, Flanders poppies, radishes, sunflowers, zucchinis, lettuce, spinach, pansies, peas, beans and tomatoes. Initially, 10 bales of lucerne mulch were purchased for the garden, but in Spring lucerne was planted outside the fence to provide for future mulching. One class succeeded in establishing lucerne as part of its plot. Climbing roses were planted up the wire fence to discourage fence climbers - a far more attractive method than barbed wire, yet probably as effective. On another weekend 'bee', three parents set up a permanent home for the worm farm in a shaded side of the garden.

The garden also needed a compost bin, so a 'compost day' was held in November 1993. In preparation for this, all the students brought in food scraps from home for a week.

On 'Compost Day', each unit rostered to come to the garden, built and watered one layer of the compost bin, either of manure, food scraps, leaves, soil or grass clippings. A couple of weeks later it was hosed by student volunteers during lunchtimes. Students were fascinated by how rapidly the original one and a half metre pile shrank as the compost decomposed.

By December, students were picking the flowers and vegetables they had grown themselves and one lunchtime Kindergarten feasted on a salad of fresh lettuce, peas and radishes all organically grown in the school garden. The sunflowers grew to maturity over the school holidays and attracted a wonderful array of parrots to feed on the seeds.

This year the garden has been arranged to crop over winter. Peas, broad beans, calendulas, violas, poppies, carrots, broccoli and Brussel sprouts are growing as well as two plots of wheat and one plot of bird-attracting plants. Sixth grade students have even designed their own potager garden as their contribution and, with the assistance of a resource teacher, another group has added a watering



system, measuring and installing it themselves.

The garden was very successful as a cross curricular activity involving science, maths, social science, language and environmental studies and has become the focus of the school's environmental curriculum. The enthusiasm towards the project shared by students and teachers alike led to it being a feature topic for student's work in 1993's school magazine. Children love working in the garden and time spent there is seen as a reward.

As well as establishing a productive garden, students have gained hands-on experience in environmental projects and social education. It has also been a valuable community exercise, with parents, teachers, students and local businesses all working to support the garden.

It has been a highly successful and popular effort, growing far beyond its original aims and should perhaps become a fixture of all ACT primary schools.

In the Ground and Growing Up – Permaculture Workshop Results

by *Julia Veitch*

On April 17 of this year I ran a one-day introductory workshop in permaculture with 15 participants. The practical exercise had four parts to it: a micro consultation with a garden owner in Ainslie, observation, analysis and design, and implementation.

1. Consultation. Our client was an elderly gentleman with Parkinson's disease. His needs and wishes had to be consulted before any work could be done, as permaculture is applied as exactly to a landowner's requirements as possible. In this instance our client wanted:

- kitchen herbs close to the back door
- low maintenance
- beauty, mystery and repose!

Observation. We then wandered systematically over the 1,000 square-metre block, and came back to compare notes with the detailed observational analysis I had done prior to the exercise. This entailed a number of overlays, mapping out the location of structures, utilities, vegetation; environmental factors such as prevailing wind direction, solar paths, shadows, climate, soil, slope, etc. Such observation is a prerequisite for any design work. Participants had seen how trees in the park across the road had been distorted by the prevailing winds and noticed the sunny spots in the garden.

Design. We then considered the possibilities of the block for our client's requests, and using the principle of starting from the back door, arrived at sites and layouts for a worm farm, compost heap, mandala herb garden, and sheet mulched beds, for a variety of flowering and vegetable annuals, perennials and ground covers.

Implementation. With great speed (15 pairs of hands make very light work!) we threw together a worm farm with hay bales; and a sheet mulch garden in the shape of a

about the whys and wherefores of nitrogen:carbon mixes and the value of a worm farm.

The next day I tidied up, and with generous handfuls of compost, planted out seedlings of rocket, garlic, red cos lettuce, chinese cabbage, and numerous herbs.

Progress. Since then, all plants have rocketed up, the worm farm has produced many buckets of worm castings, there are two compost heaps, three more sheet mulched areas, two leaf bins for leaf mould production, and many other seedlings becoming crop size. To have an otherwise somewhat neglected garden transforming into a pleasant productive area is highly motivating, especially as there is still much to do.

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Growing Vegetables Using Soil Blocks

DICKS CK.
road.

2nd road on left

road crosses
river - up hill

by Joyce Wilkie

We first came across the concept of soil blocks in both a book and a mail order catalogue from North America. However our interest in this method of plant propagation was not really kindled until we read about soil blocks in Eliot Coleman's book *The New Organic Grower* (Chelsea Green, 1989).

The description of the benefits of growing seedlings in soil

At no stage do the seedlings suffer transplant shock. They grow steadily from seed to mature plant, saving up to three weeks growing time.

Soil block formers can now be bought in Australia. As August is a fairly quiet month in most gardens, now may be an appropriate time to try out this new propagating technique.

Anyone who has ever used the old method of digging a square of lawn up in order to turn it upside down and plant it with pumpkin or melon seeds, has used the basics of soil blocks.

This big lump of sod is grown in a warm place until after the frosts have finished and is then transplanted into the garden without having to disturb the plant roots in any way.

blocks rather than in plastic containers convinced us that we ought to try buying some blockers in order to experiment with them. We managed to secure a complete set from England last November. It took a bit of time to work out a good blocking mix and to learn about how to use them, however the results have been spectacular.

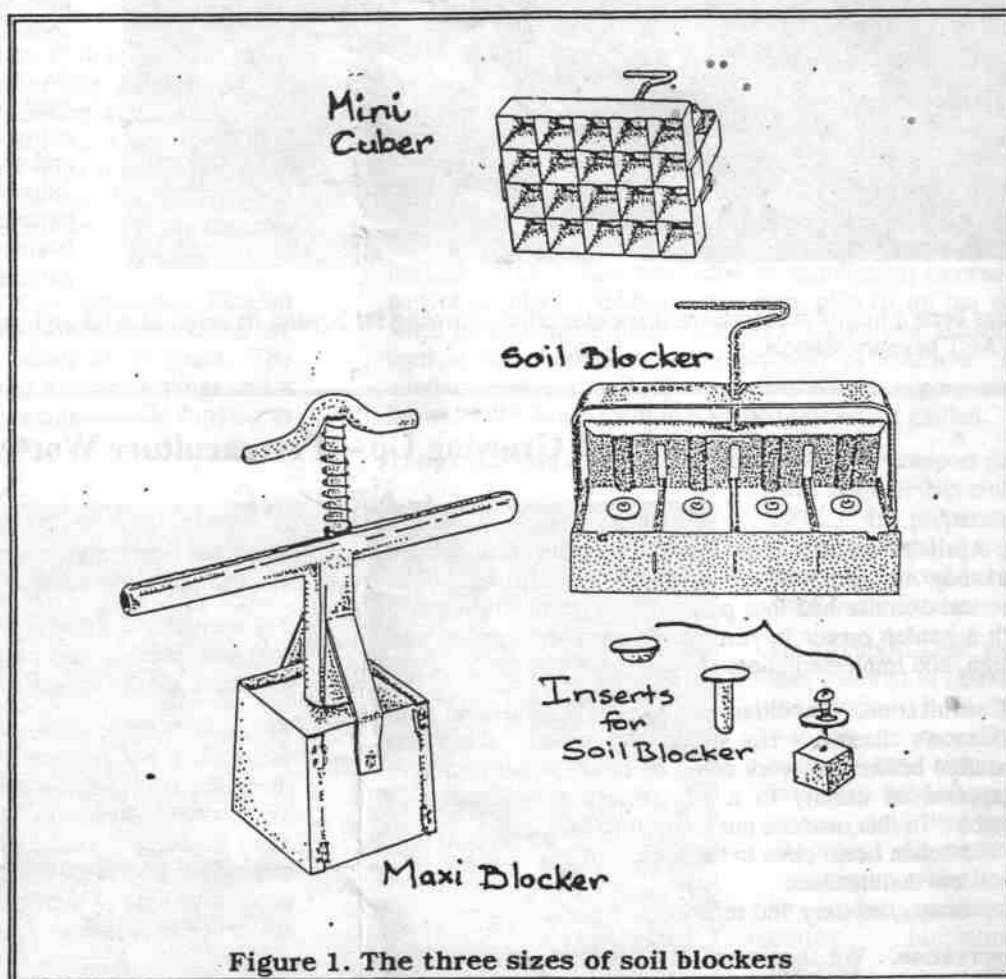


Figure 1. The three sizes of soil blockers

The Dutch have perfected this technique for all seeds and now make blocks using mechanical formers (figure 1).

The way the system works is that the block former is punched into a pile of potting mix. The handle is spring loaded and a gentle squeeze pushes the blocks of soil onto a board or tray

There is a choice of pins in the top of the block maker which leave different imprints on the top of the soil block. It is possible to have a dimple to drop a seed in or to have a larger hole tailor-made to take a block one size smaller (figure 2).

Each block is separated by a small air gap which stops the roots growing from one block into another. If the seedlings are moved up into larger blocks or out into the garden at this stage these roots will move immediately into the new soil and the plant will keep growing without the usual ten-day delay and associated stress caused by the transplant.

Most people react initially to the concept of soil blocks by saying "won't the blocks fall apart?". The secret is in the potting mix. It needs to be quite fibrous and also very wet when you make the blocks. Our recipe is given in figure 2.

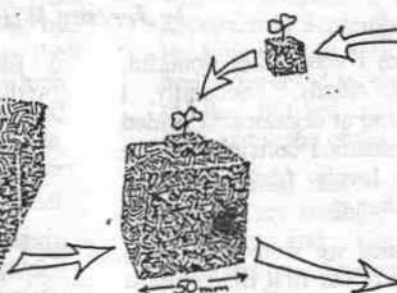
We find that it is possible to throw the blocks to one another without them breaking. Watering is best done with a fine rose until the seedlings are large enough to have developed a root ball.

Most vegetables can be grown from seed to final transplant in 50 mm blocks. The mini blocks (15 mm) are used for heat loving plants such as tomatoes which need to be brought inside or put on a heating pad to get early germination.

The larger (100 mm) blocks are necessary for big plants like melons and can also be used to grow tomatoes on for an extra month if the weather is still too cold to plant them out in the garden.

Blocking Mix:

- 2½ parts coco peat or peat moss
- ½ part river sand
- 2 parts worm castings or compost
- handful of sieved wood ash or lime if you used peat moss



Move small blocks into larger blocks, as seedlings grow.

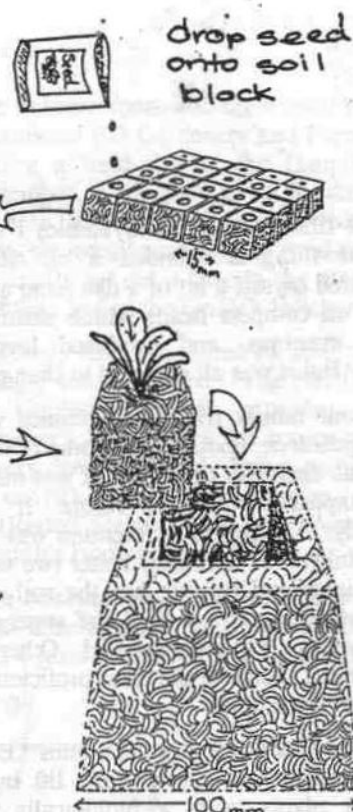


Figure 2 How to use soil blocks.

Most seeds do not mind germinating in sunlight and can simply be dropped onto the top of the block. However it is necessary to cover seeds of the onion and cabbage families in order to get good germination.

Editor's note: It is possible to plant more than one seed in a soil block. For example, Eliot Coleman suggests growing four seedlings per block and increasing distance between blocks to avoid crowding (see "The Challenge of Growing Onions", COGS Quarterly May 1993).

Pesticides and Organic Farming

A Talk/Forum for Discussion with

Kate Short

Co-Convenor National Toxic Network, author of *Quick Poison Slow Poison: Pesticide Risk in the Lucky Country*

Gil Wahlquist

One of the first NASAA certified organic farmers and long-time member of Henry Doubleday Research Association Inc.

Well established evidence exists about pesticide use and the associated health and environmental problems. Recognition of pesticide risk can lead us to discover the practical

alternatives to their use. Organic farming offers an enormous opportunity to do this, as well as addressing other environmental and social problems facing our society. Come to this Forum and explore this issue with people who are informed and experienced.

Saturday 20 August 1994 1 pm - 4 pm

at the H.A.C. Theatre (southern end of resources centre) on campus of the University of Western Sydney, Hawkesbury, Richmond

Organic Producers Council NSW/ACT

Enquiries Eric Bracken ph 045 721 002



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BIODYNAMICS

by *Jeremy Wilson*

When I first heard of Biodynamics I was rather doubtful. For one thing it sounded a bit trendy. Secondly, I considered myself a bit of a dab hand at organics. I prided myself on compost heaps which steamed convincingly on winter evenings, and produced lovely friable organic matter. But it was all destined to change.

When our family tried Biodynamics we were won over. The appearance, texture and aroma of our first BD compost heap was distinctly different. It was more like humus than the compost we'd made before. It improved the soil markedly. The moisture retention was improved, the soil's permeability was definitely better (we were deluged all that first Winter and Spring, but the soil showed none of its usual waterlogging). And the vegetables tasted finer, a little sweeter. We were thrilled. Other people had similar experiences. Some of the most proficient organic gardeners have converted to BD.

At the heart of this system is humus. Biodynamics has the proven capacity to substantially lift humus levels. This provides plants with a biologically active soil where beneficial micro and other organisms flourish which sustain healthy growth. From this environment plants can draw the nutrients they require. Below ground plant roots are well spread, balanced, neither too spare or too congested. Their health is evident in their response to the sun, following its movement through the day. Their sensitivity increases, making use of a lunar or cosmic planting calendar a practical asset. These features are not encountered in plants fed nutrients as dissolved salts, either from artificial fertilisers or from application of uncomposted animal or green manures.

Not that it is an easier system. In quite a few ways it's harder, mostly because it challenges assumptions and practices that are commonly trusted and tend to give pretty good results. There are also a number of different work practices. But most of all, Biodynamics involves a different way of thinking about and perceiving the processes of growth and production.

The biggest hurdle is recognising that the input/output type of thinking most of us have grown up with is highly overstated in conventional science. Too much is claimed as fully explained fact, suggesting tidy chemical equations. It gives the impression plant biology is easily controlled, while too little recognition is given to natural cycles and the benefits of enhancing them.

The input/output approach appears to treat plants and animals more as machines than living organisms. This approach tends to discount the importance of vitality, which makes an immense contribution to the overall cycles of energy and substance, and to life force itself. Too many of these qualitative factors are considered subjective and are consequently "outlawed" from conventional scientific thinking. It's not that modern science has got it all wrong. It is a tool for the literal explanation of phenomenon by theory and is poorly developed for interpreting the picture as a whole. It seeks to compensate with intensive knowledge of isolated components.

Biodynamics draws much of its strength from recognising that, within the context of the whole living system, much of the creation of vitality - of life force - lies in the process of disintegration and chaos. BD helps us to see how this process goes beyond the mechanical liberation of nutrients. It is through working with the living energies of this process which can lift the strength and vitality of the organism. This affects the way it grows to maturity, resists pests and diseases and sets viable seed - qualities which many producers find are transmitted from generation to generation. Many who save seed from previous harvests will have found this and wonder how it fits with the conventional wisdom on the inheritance of genetic as opposed to acquired characteristics.

So it's more than working with the substances which are essential to support biological activity. It is seeking to guide the dynamic forces that imbue organisms with a life force.

The Biodynamic system, developed by Dr Rudolf Steiner, an Austrian scientist, utilises a number of preparations, each of which has a specific function which enable practitioners to balance and guide the natural processes which lead to healthy plant and animal growth. The most important preparations are:

- . **BD 500**, a soil spray deriving from cow manure. It activates beneficial bacteria and other life forms in the soil, promoting the development of a humus-rich structure. It is normally applied in Spring and Autumn, when plant growth is vigorous. It is not a plant fertiliser, its role is to invigorate the soil enabling it to provide a more fertile environment for balanced plant growth. It is of major importance in broad acre farming.

- . **BD 501**, sprayed as a mist at dawn onto the plant leaves is made from fine-ground quartz crystals. It helps the plant to "gather" light, bringing crispness and crystallinity to balance over-lushness and tendencies to disease associated with an over-abundance of water.

- . **BD 502-507** are six herbal preparations specifically for insertion into compost heaps. The humus-rich compost they help produce is the most important component in the development of a sound Biodynamic soil. The preparations can also be used for making liquid manure which may augment, but not replace the role of compost and BD 500.

- . **Fruit tree sprays and pastes** have been developed to enhance tree health and prevent or control aphids, leaf curl, shot hole and other conditions.

All of these depend on the application of sound management practices. It is essential that every action enhances development of soil structure. Aeration is essential - there's no valuable life in soil without air. The right implement is important. The cutting action of a spade or shovel blade damages soil structure by smearing the interlinking ingredients of the humus and shutting off the air supply to the soil below. A garden fork or slowly drawn tined implement can open and gently lay back the soil, exposing it to the elements.

If the soil breaks out in large lumps, its structure can develop more effectively if it is allowed to break down though natural weathering (and with application of BD 500). It is counterproductive to try and hurry it along by crushing it down with an implement. This fragments the soil, rendering it down to its component particles which have nothing to hold them apart. When wet, the soil simply collapses, excluding air, suppressing biological life. This makes the soil better suited to weeds than higher order, more useful plants.

A good Biodynamic operation seems to emit a certain "light". It's hard to explain, although many people notice it. Elliot Coleman remarked on this when speaking at the "Allsun" workshop about a BD farm he visited in France. You can see it at Lyn West's place in Queanbeyan. The Ward's farm near Cootamundra (which supplies much of Richard Odell's lamb, pork and beef) gives the impression of a strong vitality. It can be perceived quite clearly at the Haupt's farm near Narrandera where the neighbouring farms offer a sharp contrast.

If you would like to know more and see a good BD farm in operation, the Canberra BD Gardeners and Farmers Group will be conducting a field day at the Haupt's farm in approx. mid September. I will have to fix the date closer to the time to fit in with the cropping schedule, which is pretty badly disrupted by the continuing lack of good rain. When the date is fixed I will put out a flier in the major organic fruit and vegie outlets and in the Griffith Butchery.

For reading material, Alex Podolinsky's two volumes of lectures are strongly recommended. The NZ Biodynamic Farming and Gardening book provides a useful introduction. Steiner's lectures are the source documents, they are immensely deep, and fairly heavy going. A wide range of books on BD and associated topics is available from the Orana (Rudolf Steiner) School in Weston - phone 288 4283, and Smith's Bookshop in Civic.

If you want more information, and/or the BD preparations (with guidance on their application) phone me on (06) 227 1359, nights. It's a rural switchboard so keep trying.

Happy Cultivating!

Tools for Vegetable Growing

by Michael Plane

Tools are extremely personal. It really is a matter of what works for the individual. However the correct choice of implement for the job can save immense amounts of physical labour. It is also as well to remember that there have been some modern advances which really are effective, but also be aware that many modern tools, even from reputable manufacturers, are badly made.

When Joyce and I decided to change our operation from a large domestic vegetable garden to a small commercial operation we were faced with decisions about tools, management and ergonomic efficiency. We also addressed the need to deepen our topsoil faster than we had been doing in the past with mulches.

Being devotees of the Yeomans principles on non-inversion tillage for soil improvement we looked for ways of doing deep cultivation without inverting the soil. Of course, I had to go back to the old literature, and the implement which kept coming up was the broad fork. Certainly no such beast was available in Australia but plenty of types and designs were described in overseas publications particularly from North America.

As luck would have it I have a friend who is a very clever engineer and after much trial and considerable tribulation the first Gundaroo broad forks were made. We now had a deep non-inversion tillage tool but hoeing large beds was proving a problem.

As former mulch gardeners we had very little in the way of hoes plus a huge weed seed burden. Again good fortune intervened when I became aware of the all-purpose Asian gardening tool - the HoMi - while a fellow we know produced a home made wheel hoe. He was loud in his praise of this implement, so back to the workshop we went and out came a tool which was indeed a great boon in the weeding and cultivation departments, and the HoMi replaced all small trowels, forks and dibblers.

At about this time I was looking for a good model for our operation and came across Eliot Coleman's *The New Organic Grower*. It was indeed like finding the Holy Grail and made me aware of a whole range of well made and ergonomically sound tools. Of the tools that Eliot describes in his book our favourites have become the broad fork, wheel hoe, collinear hoe, a sturdy three tine cultivator, an oscillating/stirrup hoe, and a light rake. With this tool kit and perhaps the addition of a sting line and a small trowel or HoMi one should be able to manage even the largest garden.

A few tips on evaluating the tools you are considering buying.

Look at the steel. Forks, spade, three tine cultivators and hand hoes should be made from forged rather than pressed steel. Stainless steel tools should be made of tool grade rather than pressed steel and should be able to be sharpened with a fine cut file. The blades on oscillating hoes should be of spring steel and should take and hold a good sharp edge.

Handles should be of wood, should be oiled rather than varnished and be of the correct length. If you stand upright with a long-handled tool vertical in front of you, the length of the handle should be level with the tip of your nose. If it is longer you are carrying around extra weight, if it is shorter you can't use the tool effectively without bending your back.

Finally do look after your implements. Many tools from my grandfather's generation are still in good order. When you are finished the day's work put them out of the weather. If you think you are not going to use them for some time then wipe over the steel parts with an oily rag. Keep sharp tools sharp. Oil the wooden handles of all tools 3 or 4 times a year. These simple measures will repay you and help develop that personal relationship with the tools that makes for pleasurable and efficient gardening.

Organic Foods - The Customer and the Market

Excerpt of a talk given by Ian Diamond to the June COGS general meeting

Organics in Australia has come a long way since 1979, when I first started to buy Organic foods as a consumer. In those days there were only two outlets in Melbourne and the quality of the produce left much to be desired. In hindsight, it is also apparent that some of the items sold as Organic were not grown organically.

Back to 1994, and now we have many different outlets of four types handling Organic fruit and vegetables:

- specialist Organic stores (e.g. Green Groceries in Griffith, or Club Vedge in Yarralumla);

- natural food stores carrying some Organic foods (e.g. Mountain Creek Wholefoods in Griffith);

- greengrocers carrying a range of Organic produce (e.g. Joseph's A-1 in Fywick); and,

- supermarkets carrying some Organic foods, both fresh and non-fresh (e.g. some Safeways stores in Melbourne, Purity Supermarkets in Tasmania, etc).

All of these outlets expose a wider audience to the delights of Organic foods. And at the same time the profile of an "average" Organic foods customer has changed. No longer just for "hippies", Organic foods are consumed by people from all types of backgrounds in many different areas. One of the most common attributes of the Organic customer is their general awareness of "environmental" issues, the "ecology", personal health and well-being.

Overseas, for example, in Germany the Organic customer is even more "environmentally aware" than his/her Australian counterpart, and is frequently choosing Organic foods because of the strong ecological and environmental desirability of Organic farming.

What about the Organic farmers in Australia? One of the most disappointing aspects when visiting Organic farms is the realisation that many Organic farmers do not actively purchase Organic foods for themselves or their families. Any Organic farmer not purchasing Organic foods has no right to blame others, if they don't have a market for their Organic production!

If you are wanting to have markets for your Organic production, there are four main marketing avenues:

- direct to consumer;

- sell to retailers;

- send to wholesalers, agents; or,

- export markets.

People like Joyce Wilkie and Michael Plane are far better qualified to talk about direct to consumer marketing, so I will leave that to them! Export marketing is very product specific, and I will talk about that if invited to speak again!

The retailers and wholesalers of Organic foods have very similar major requirements, that I call the three C's: **Certification, Continuity & Quality** (well, almost three C's!). Sophistication of the Organic market has developed to such a stage that consumers and, therefore, retailers and wholesalers, are expecting their Organic foods to be certified. Please consider, that the retailer is the one most publically exposed to questions of integrity. By asking a retailer to sell non-certified foods as Organic, you are putting the retailer in an uncomfortable position, and are

leaving them open to legal liability in the near future.

Certification refers to third -party certification by such government-recognised bodies as the National Association for Sustainable Agriculture, Australia (NASAA), Biological Farmers of Australia (BFA), Biodynamic Research Institute (BDRI), and Organic Herb Growers of Australia (OHGA). Local certification systems can tend to be a little bit "in-bred", and do not carry the same integrity as an "arms-length" certification process. Please remember that it is the retailer that is exposed to public liability, not the grower!

You do not need to be a large producer to supply to wholesale markets. Having been involved in wholesaling Organic foods for more seven years, I can assure you that Quality and Continuity are more important than Quantity. To supply to wholesale you must be able to supply a regular quantity on a regular (weekly or more often) basis with consistent high quality. Quality always sells first, and gets the best prices. A smaller producer can usually give the attention to quality detail that a larger cannot.

But please do not try to market your excess through wholesale. All wholesalers of Organic foods expect to be supplied regularly, and you can expect them to treat you similarly, regardless of quantity, providing you have quality.

Anyone wanting more specific information is welcome to contact me by telephone on (06) 295-3430 or 018-548-473.

POULTRY MANURE - VEGETABLES LOVE IT!

A weekend workshop will be held in early November:

KEEPING FREE-RANGE POULTRY

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Officer in charge of the Free Range Poultry Unit
University of Western Sydney

Joyce Wilkie

Well-known organic farmer

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Orchard Programming

by Owen Pidgeon, "Loriendale" Spring Range Road, past Hall
from a talk presented at the April COGS general meeting

The orchard at Loriendale contains a wide range of apple varieties and other fruit that is considered suitable for growing in the temperate southern highlands. Over the past 8 years the locations of some plantings have changed, due to poorer drainage in some spots or drier conditions in the summer months.

We need to recognise and accept the natural conditions that we have to work with; working *with* nature is important. Aiming to enhance the natural conditions is fundamental. The Canberra region may not have the highest soil fertility and the climate may be somewhat harsh, but there are some distinct advantages for the horticulturist and the home gardener.

Seasonal Elements

The local conditions have brought to us the range of trials and challenges over the past eight years. In brief:

Frost

- the early blossoms of the apricot and the almond mean that they are frost prone at the Autumn flowering time.
- September will see the beautiful pinks of the nectarine and the peach, followed shortly afterwards by the white blossoms of the Asian and European pears. Good pollination with our bees requires gentle days, sunny conditions. The still days are often followed by the frosty mornings.
- We have trialled hessian wrappings, but the strong winds are destructive. Growers at Araluen embark on the night fires, being lit at 2 a.m. and stoked until sunrise. They have also purchased several wind fans - but at \$15,000 a unit they are not for the average back-yard. Perhaps you take your chances.
- Last season, the frosts came late and ruined many an apple blossom in October 1993. Piallago recorded the sharpest sting for over 10 years, including the loss of the Red Delicious crop. Each variety has its own time; for our orchard with a higher elevation, the Japanese Fuji crop was wiped out.

Floods

- Too much rain can be a big problem for fruit growers around Canberra. Good drainage is essential, but it may take a prolonged wet spell to show up your "soft spots". I lost 12 cherry trees last Spring. These trees had been growing for 5 years, but the overwet conditions in September/October drowned the new filament roots going outwards to search for the nutrients.
- Replanting will require change: either a hilling up, a trenching out of the sub-soil clay (but not leaving a dome sump) or a selection of hardier varieties. The fruit trees that can stand up to overwet conditions the most are pears, nashi pears and quince trees. That was the reason for my initially choosing to plant a small grove of nashi pear trees. Now I will plant more, as I have tasted the delectable juicy fruit - ripe from the tree.

Drought

- The last season moved across into near drought conditions after Christmas. Have we the water supplies to see the season through? Have we the mulching around the trees to keep that precious moisture underground?
- Late in the season, birds will come from all directions in search of food and moisture. The rosellas even eat into the Grannies to quench their thirst. Then along come the bees to clean up the remainder of the fruit, leaving only a dry shell of the skin.
- The drought brings one benefit. Lack of humidity means minimal fungal problems - although any scab already on the apples from the wet spring will dry and crack the fruit. The very dry conditions also led to severe natural cracking of my Cox's Orange Pippin. This coming season we shall work hard to fertilise the soil well, to keep the watering very regular and perhaps string up some shade cloth over the rows of Cox's.
- I inspected one of Australia's largest hail netting structures in Orange in late April. It covers some 70 acres and cost close to \$1 million. The area is very hail prone. The orchardist notes that the drawback is that natural drying after rain is limited and slow. He targets the upper end of the market by heavily thinning the fruit - a large and premium looking apple but unfortunately not organically grown.
- For more reasons than one, we will take our chances with our trees out in the open. But the finances have taken a belting with the past four seasons. Oh, that the season may shine upon us this year.

Support Systems

Bee Keeping

- The little insects are as valuable as gold. Pollination in the Springtime is so much dependent upon the work of these little creatures - though some other insects and birds play a small role.
- Honey from our five hives tends to take on a distinct blossom then a 'fruit' flavour. Cleaning out the bird-pecked apples leads to a honey with a high sugar content. Somewhat unique!

Free Range Poultry

- Some lovely little bantam hens were acquired in the mid 1980's and allowed to roam around our first orchard. Bantams were selected because they live longer than the large fowl and they
- do not dig too deeply around the root structure.
- In the past three years, we have experienced increasingly regular attacks on our flock from foxes coming down from the hills. We have invested heavily in the U.K. designed Electranet (source: Michael Plane - Gundaroo). This floppy electric fencing is very mobile and now the hens are doing their magic work cleaning up the grubs and codling moth larvae.

- The previous winter, we relied on Pekins and Chinese Silkies. They did not prove to be the full answer, though they are very endearing birds. They are not robust or active enough and they dislike immensely wet conditions. We have now introduced the black Langshans and the Wyandottes. Old English Game bantams are just as effective but not so gentle and domestic.
- The Orchard may soon have a major sideline. They all live in wonderful timber hen-houses that are semi-mobile. Relocations takes only a short time, with the help of the David Brown tractor (or 10 burly friends).

Trellising

- Our orchard has adopted trellising, akin to the modern orchards of Tasmania. The initial capital investment is substantial, with hardwood poles, 8 foot steel posts and 4 strands of wire. However, the finished product allowed branch support and training with ease. We use 30mm strips of leather to surround the branches, looped back to the trainer with tie wire.
- Around half of our orchard is planted out on the sideways espalier Bouche-Thomas system. Trellising is very helpful for training the branches to move across sideways to the next tree. This system reputedly aids the fruiting hormones with the more horizontal structure.
- The other half of the orchard is planted under the Minimal Australian Pruning system. The high overall investment in a new orchard encourages today's growers to look for ways of securing a return in 3-5 years; decades ago, the practices were to give priority to shape and not worry too much about a large crop until years 7-8. Even an organic orchardist cannot go on forever waiting for that first good crop.

Irrigation Systems

- We have chosen the micro spray irrigation system. Each tree is watered, on a 3 to 4 day cycle, by two full circle micro-spray units. The risers are 15cm high and located about 0.5 metres each side of the tree.
- We use surface water, pumping directly from the dam with a Deutz diesel unit. Two feeder lines are kept clean by Israeli Arkell filters. The pressure is sufficient to water some 250 trees at any one time, usually for 5 hours. By watering in the evenings, moisture loss is minimised.

So now it is to the new season. Some more varieties of apples and peaches have been planted. The dead cherry trees have been replaced and the living pome trees pruned. The Complete Organic Fertiliser has been ordered from VicMills and the weather bleached lucerne hay is stockpiled and ready. What remains is some hours of vigorous labour and the warmth of the coming Spring.



"The Water Efficient Garden"

Book review by Gayle Stockley

This book, published by Random House Australia, couldn't be more aptly titled. The cover notes describe it as: "a practical and innovative guide" to the efficient use of water in the garden and it more than lives up to that billing.

Available from the Co-op bookshop for \$19.95, *The Water Efficient Garden* has been put together by three authors with expertise ranging from building, garden design, horticulture and natural farming through to engineering and irrigation. As a result the text has something for those who are focused on plants and soil as well as people who are looking for more technical information about how to design their own irrigation system.

I found this book full of good sense and information, especially as, according to the local cockies, we are moving into a drought period.

As a layperson in the early stages of planning a garden and irrigation system I scanned over some technical information regarding irrigation pipe sizes, joining methods, installation of the same and types of drippers, microsprays and sprinklers. I did, however, find other sections of the book quite enlightening, particularly information about soil

and water and plants and water. Terms and information such as "free capillary water" and "available capillary water", "field capacity and permanent wilting point", "translocation", "transpiration" and that "a rye plant may have a root network totalling 610 kilometres"!

My belief in the importance of mulching and humus in soil was reaffirmed as "W.E.G" states: "soils rich in humus will hold far more water than those low in organic matter", and the "use of mulches not only reduces water loss through evaporation and surface drying, but also controls weeds and the resultant water loss through transpiration of water through their leaves."

I was also impressed by: the common sense approach of *Water Efficient Garden* in designing gardens with different water use zones in mind, the lists of water-efficient plants suitable to most Australian gardens and the innumerable facts, figures and illustrations regarding every aspect of water use, collection and recycling.

Water Efficient Garden is not only a readable and interesting reference book but an essential tool for people who want to get the most out of their garden in a land that carries the unenviable title of the driest continent on earth.

Your Rural Correspondent David Odell

Winter's Coruscation



In a previous article for the Quarterly I posed the question of trying to assess the time when a drought begins. At that time Drought had only placed a finger on the countryside and tested us with the false promise of an early break with some light falls of rain (sufficient to prepare for the overdue planting of winter feed crops). But since then its hand has been more firmly laid - and now its grip is beginning to tighten! Instead of having some greenery to tempt the stock into forward condition it's time to put out hay and chaff to maintain them while they nose about for what dry feed remains in their paddocks.

But the dry weather has its compensations. The days just sparkle with freshness after the early morning frosts have been chased away by the sun, the trees weave their tracery against the vivid blue of the sky, their leaves glistening with miniature rainbows, and it seems that the heat of last summer never was. The nights, too, are special as the stars have a particular brilliance in the clear conditions and it seems quite normal to resume conversations with familiar constellations and marvel at the limitlessness of space.

Of course we've had our 'grey' days when the early mists turned to fog and hung around until the watery sun claimed the afternoon but these only served to heighten those sparkling days of winter and the Season in its turn.

She said to me "Choose your property in a drought"! At that time I was a callow youth of seventeen travelling up country to my first job as a jackeroo. The train carriages had no corridors, so isolated in our railbound Tardis my travelling companion, in the usual friendly country fashion, fell into conversation to pass the time.

She was a middle-aged lady returning to the family property after a visit to Sydney and I must have confided in her my ambition to own a farm. So she repeated that valuable advice "Choose your property in a drought, because a farm needs water, and water conservation and water harvesting are the keys to a successful farm - and it is only in a drought that you can see where the water lies, what water remains and whether the property can be drought proofed." I wish I could thank her again for the wisdom in that simple statement because I can't remember where she was from, or what else we talked about, but her advice remained with me until I could put it into practice almost forty years later.

When I first saw the land which was to become "Rockyglen" it was in the grip of the '82-'83 drought. The soil was so dry it creaked a protest at my intrusion, the trees had withdrawn into a dessicated silence and the birds had deserted the area - but there were signs of water. Down in the gully a spring still provided a little water for the kangaroos and wallabies; there were also signs (provided by patches of close clipped green grass) that water was close to the surface, and the natural geographical features offered a promise of future dam sites for water harvesting. This was the place for which I had been seeking - and it was at a price I could nearly afford. Since the time of that commitment there has been a continuing love-affair with

water in order to proof the property against the next (this) drought, mostly successful, often frustrating, but always fascinating.

Percy Yeomans is another to whom I owe a debt for guidance in the area of water harvesting. It was his philosophy that it was profitable to devote 90% of a property to water catchment and water harvesting if it served to support and irrigate the remaining 10%, especially during times of drought. One can always buy in feed (at a price) to support stock during dry times but it is extremely difficult to be independent when one runs out of water.

Then there is the debate (especially for owners of smaller properties) as to whether reliance should be placed on bores or dams. In this respect the needs and requirements of individual properties should be carefully assessed as there is no one right answer for all - but certain facts need to be considered before a commitment is entered into. Choosing a site for a bore is relatively easy (just pick any spot within your boundaries) but whether it will return water, if at all, is another matter. A word of caution, get as much advice as you can from experienced operators such as Soil Conservation, water diviners and bore drillers but then make your own decision after getting a "feel" for the place and a study of its geological structure.

For instance SoilCon can tell you of the success of bores in the area as all of these have to be notified and marked and you can follow these up by finding at what depths water was found, were there any dry drills, what is the flow and what is the quality of the water? Often a water diviner can help locate a suitable site and also give an indication of depth and flow and water drillers also can provide local experience. But don't be fooled - you have to pay for the drilling at a cost per metre and there are deep bores and there are dry bores and bores which produce very little. And not all operators are so charitable as to work on a "no water no pay" basis, and even when they do it can provide a cause for dispute because costs have to be recovered or go out of business.

Then the bore has to be lined, a submersible pump installed and electricity connected and paid for. Then there is the maintenance of the pump to be considered and the running costs in paying for the electricity - so it is not cheap - and it is all below ground and out of sight. Of course, you don't hear the horror stories until later (or you may experience them yourself) like the pump which came off the line which was pulling it up for an unclogging - and which couldn't be retrieved - so the only solution was to purchase another pump to replace it. Now there are two pumps in the hole and only one of them is working! Or the bore lining which fractured, or the hole which has silted, or the water which proved almost too hard to use, or the carelessly sited bore which has now dried up leaving money in a hole in the ground. Happily, there are success stories when it comes to drilling bores but it is just as well to be aware of the odds before going ahead.

Dams, on the other hand, provide a visual enhancement to the property and available water for wildlife as well as domestic stock. Siting a dam is important if it is to take advantage of the natural features and provide as much water as possible for your investment. Sufficient material has to be "won" so that the freeboard of the wall is at least one metre above the water level, there has to be clay to seal it and a spillway as the outlet to cope with the most torrential of downpours. Of course, it doesn't look pretty when under construction because great scars appear and sometimes trees have to be removed - and I remind myself that eggs have to be broken to make an omlette. But it doesn't take long to grass and heal the scars and to watch the newly planted trees catch their reflections in the water.

Because I make my dams as deep as possible I do not encourage swimming in them as cramp can catch even experienced swimmers unawares. As for small children I talk to them of its dangers and pleasures before letting them loose to enjoy the farm and so far this strategy has proved successful. During the height of the bushfire season I was glad to have sources of readily available dam water, not only for my own mechanical pumps but for the Bushfire Volunteers should they require it, because when water is needed for an emergency you need lots of it in a hurry and by then it's too late to worry if the litre per second flow from the bore is adequate - and always assuming that the power lines are still operating to provide the electricity for the pump.

And there is another advantage in having dams - they can be used for growing fish. Just try fishing a bore hole!

Spring is not far away so planning farm activities takes on an added urgency if we are to be ready for the new season. There is the garden looking a bit bedraggled which, in spite of the drought, still is moist enough to germinate weeds but it will be good to compost them before they begin to dry out and spill their seeds.

The cauliflowers kept their secret well, their outer leaves browning off to give the appearance of approaching decay

but within the tightly curled, green, inner leaves were the most magnificent white heads I have ever grown, and with an unsurpassed flavour! We blanched and froze the majority so that now we'll have our caulis for Christmas.

The carrots will have to be lifted because they are getting too big for their skins and are starting to split. Although this does not seem to have affected their taste or crispness it does affect their appearance for sale so we may have to freeze some of these as well.

The onions have been dried off and put into store. As they are of the Creamgold keeping variety we should be able to enjoy them until the new crop comes in. Broad beans have been planted in the tyres where the potatoes grew previously not only as a "break" crop but to provide some early greens when there is little else available until the weather warms up. I will also be planting some peas so that they come into flower after the last of the expected frosts. In the meantime weeding, composting and rotary hoeing will get the garden into shape for when planting takes place in earnest.

The loft within the cowshed will serve two purposes, storage above and a ceiling for the pens below. I am convinced that in this climate we should adopt some of those European practices with respect to animal husbandry and provide shelter during the extremes of weather we experience. As the cows are due to calve in September/October ("Affer" has succeeded where the AI service did not) we are still within our deadlines but without too much time to spare. (Affer gets his name because he is Affer-Bull).

Chickens have been ordered for September, (100 Isabrown pullets and 100 meat chickens), and as their prospective brooder shed is where the hay is presently stored I can see that our priorities are starting to mount up if every thing is to be ready on time.

That's the beauty of living on a farm, there's never a dull moment.

IFOAM Conference 11-14 December 1994 & General Assembly 15-16 December 1994

Lincoln University, New Zealand Pre-Conference Tours in New Zealand

In the May *COGS Quarterly* we outlined details of pre-Conference tours available in Australia. We now have information on the pre-conference tours available in New Zealand. All tours include travel to Lincoln University, the Conference venue.

Tour 1 (3-10 December): Auckland, Bay of Plenty, Rotorua, the great volcanic plateau, Manawatu, Wellington, then via ferry to the South Island, including Blenheim, Marlborough area, and Christchurch. Includes visits with local organic & environmental groups at each stop. Themes include urban problems, indigenous peoples, organic research, development & production.

Tour 2 (6-10 December): Auckland & Bay of Plenty areas. Themes include urban & rural interface, lifestyle, and the commercial production/ marketing interface.

Tour 3 (7-10 December): Hawkes Bay & Gisborne. Themes include land management, environmental issues, Maori culture, organic food processing & wines.

Tour 4 (7-10 December): Nelson & Marlborough. Themes include fisheries & aquaculture, self sufficiency in bioregions, exotic/indigenous forests, honey, fruit production, biocontrol of wasps.

Tour 5 (7-10 December): Canterbury. Themes include from high country to the plains, rabbits, Hieracium, organic production in agriculture, organic livestock & cropping.

Enquiries to:

IFOAM Conference
Centre for Continuing Education
P.O. Box 84
Lincoln University
New Zealand
Phone: +64 3 325 2811 or +64 3 325 3819
Fax: +64 3 325 3840
Email: CRABB@LINCOLN.AC.NZ

Some Thoughts on Mints

by Peter and Shirley Carden

Through the ages, from Roman to present times, mint has attracted a great deal of interest from mankind, whether to be used as a medicine or as a condiment. The Roman legions carried cuttings of their favourite herbs wherever they went, to be used both for cooking and for medicine. Mint was a firm favourite. The tonic effects of its delicious smell proves stimulating to the mind as well as the appetite. In ancient times students were advised to plait a crown of mint to wear around the head.

Aromatherapists consider essential oils of certain aromatic plants can influence mental states or improve memory and concentration. Experiments in some American universities have found that whiffs of the essential oil of peppermint improves alertness by up to 30%. The fragrance can enhance the sensory pathway for visual detection. It allows more control over the allocation of attention. It is particularly effective in the case of repetitive computer tasks.

All mints are astringent. Disorders of the stomach are relieved with the use of mint. Spearmint is milder so considered more suitable for children in the case of such problems as teething, wind, colic and fever. A weak tea of the fresh mint would be helpful cooled and mixed with a little apple juice.

Culpeper considered mint to be useful in all disorders of the stomach. The after dinner mint was no doubt inspired by the use of mint to relieve the indigestion brought on by the hearty banquets of ancient times, but I doubt whether it would have the same effect as a cup of tea brewed from fresh peppermint.

Maurice Messegue, the famous French herbalist, prescribed mint as a balm for the entire digestive tract, regulating stomach, liver, gall bladder and intestines, effective against stomach gas, stomach spasms, vomiting, liver complaints, intestinal parasites and colic. Young lamb is tough on the digestion - no doubt the reason mint sauce was invented.

A thermos flask of hot peppermint tea with a little grated fresh ginger is helpful for anyone prone to travel sickness.

Fresh peppermint is invaluable for those who suffer from hay fever. If you haven't the time to make a cup of tea, try chewing the fresh sprigs. The effect is instantaneous - no more fits of sneezing, runny eyes and nose. It has the effect of drying up the mucous (don't be so enthusiastic as to overdo it - all things in moderation). It is thus also helpful for all the "itis" illnesses where excess mucous is a problem, such as bronchitis, tonsillitis and sinusitis. Try a tea made from the elder flowers, yarrow and peppermint to relieve the symptoms of flu.

Another very valuable mint for modern times is lemon balm. It has an incredible calming effect on young and old, whether it be a cranky toddler, an obnoxious teenager or a disagreeable adult. It offsets the stresses of modern times. Try it before a trip to the dentist, a job interview or a confrontation with a fellow human being. It can be brewed as a tea or blended into an unsweetened apple juice with a little peppermint, lemon verbena or lemongrass for extra flavour and lemon juice to keep it green rather than murky brown.

Lemon balm is also effective if used in beekeeping. If the inside of a hive is rubbed with the herb before installing a swarm, the bees will be more likely to settle into their new home. It can also be planted near the hives and will attract bees to the orchard if planted around the trees.

The diversity of mints seem to be unbounded. Mice are reputed to dislike the smell of peppermint, so plant it around sheds and near doors. Pennyroyal, a type of mint, is invaluable used in the bedding of dogs to discourage fleas.

Mints, especially peppermint and eau-de-cologne mint, are rampant growers, so they need to be confined. But I must admit that one of my favourite jobs in the garden each winter used to be cutting the peppermint patch back to size. I would systematically work my way around it pulling out all but a small area. The aroma was an absolute joy to my sense of smell and I felt wonderful after it!

Spring Vegetable Planting Guide

	SEPT	OCT	NOV
Globe artichoke	T		
Jerusalem artichoke	T		
Asparagus	S		
French beans	S	S	S
Beetroot	S	S	S
Broccoli			S
Brussels Sprouts			S
Cabbage	S,T	S,T	S,T
Capsicum		S	
Carrot	S	S	S
Cauliflower			S
Celery	S	S,T	S,T
Cucumber	S	S	S,T
Eggplant	S	T	T
Endive			S
Leeks	S,T	S,T	T
Lettuce	S,T	S,T	S
Marrows	S	S	S,T
Melons	S	S	S,T
Onions	S,T	T	
Parsnips	S	S	S
Peas	S	S	S
Potatoes	S	S	S
Pumpkins	S	S	S,T
Radish	S	S	S
Rhubarb	T	T	
Salsify	S	S	S
Silverbeet	S	S	S,T
Spinach	S	S	
Squash	S	S	S,T
Sweet corn		S	S,T
Tomatoes	S	S,T	S,T
Turnips (white)		S	

S = Seed Sowing
T = Transplant

INTRODUCTION TO COMMERCIAL HERB GROWING WORKSHOP TO BE HELD IN QUEANBEYAN

Howard Rubin of **Herb Farms Australia**, South Lismore, and Queanbeyan Adult Education will hold a two day course - Introduction to Commercial Herb Growing - on 24 and 25 September 1994. Topics covered will include economic feasibility, marketing, varieties to grow, preparation of soils, organic methods, propagation techniques, harvesting and post harvest, drying and value adding, plus more. The cost of this course (including morning and afternoon teas and lunch on both days) will be \$175. See advertisement for bookings or telephone 06 2992520.

Howard and his wife Elle arrived in Sydney eight years ago and have been there ever since. Their arrival was a big plus for the Australian herb growing industry. The Rubins were recently awarded the Excellence in Rural Industries Award for their highly successful Clunes-based business, Herb Farms Australia.

Both trained herbalists, Howard and Elle were in Europe during the Chernobyl nuclear disaster, which convinced them they needed to find a cleaner place to grow their herbs.

"We were reading the paper in London one day and we came across an advertisement that said, 'would you like to be a business migrant in Australia?'" said Howard. "We decided to give it a go."

They began growing and selling herbs in Clunes for culinary use all over Australia. Fresh herbs, however, are probably the most perishable of all goods. Solution? The Rubins came up with specially-designed plastic bags that absorb moisture and keep the herbs fresh for up to two weeks. They then began exporting fresh herbs and edible flowers to Asia. "Our farm took off right away," said Howard. "There was a ready market for our business. We couldn't keep up with the demand."

The Rubins realised they would have to involve others in their success right away. They set about to convince other growers in the area to become herb growers for them. They had the option of growing 100 acres of herbs or finding 100 people to grow one acre each. They chose the latter. What began as a good idea has fast become an industry. Now 30 farmers on the North Coast grow herbs and edible flowers, which are all marketed through Herb Farms Australia.

There seems to be no shortage of growers. The Rubins' two-day Queanbeyan September course will teach people how to grow herbs. Similar courses have been fully booked for the past three years. "It's an accredited training program," said Howard. "A lot of people are getting the CES to pay for the course and coming off the dole. We take the risk out of this venture because we're a guaranteed market. We buy the crop back. All they have to do is grow it." The latest contract is with Blackmores to supply most of its medicinal herbs.

Elle has created six different blends of herbal teas which are marketed as The Koala Tea Company. These teas have been so successful that the Rubins are now negotiating with both Japan and America and expect to secure contracts with both these countries within six months.

HERB GROWERS WORKSHOP

with Howard Rubin of Herb Farms Australia
Winner of the Excellence in Rural Industries Award

Introduction to Commercial Herb Growing

topics covered:

economic feasibility, marketing
varieties to grow, preparation of soils
organic methods, propagation techniques
harvesting & post harvest
drying & value adding, plus more

To be held 24 & 25 September 1994, 8:30 am - 5:30 pm
"Summerlands", Captains Flat Road
Morning, afternoon teas & lunch included
\$175 inclusive

Please post to: Queanbeyan Adult Education,
P.O. Box MDD 6030, Queanbeyan N.S.W. 2620
Ph: 06 299 2520

**I enclose \$175 for enrolment in the Herb Growers
Workshop 24 & 25 September 1994**

Name _____ Telephone _____
Address _____

Are you a resident of Charnwood, Dunlop, Evatt, Flynn,
Fraser, Macgregor, Mckellar, Melba or Spence?

You are invited to a PUBLIC MEETING

to seek community support for the
North Belconnen Urban Landcare Group

Wednesday 24 August 1994 4:30 pm
Mount Rogers Community School Spence Campus,
Crofts Crescent Spence

for further information contact
Tony Bray, ACT Parks and Conservation Service
Ph: 207 2484

Organic Farming - Field Day

An integrated system of organic farming practices is being established by David Odell on a property above Bungendore (see article on pp. 18-19). "Rockyglen", once a rocky ridge, is being developed into a productive, environmentally safe farm suitable for producing healthy vegetables, fruit and livestock products. Humans, animals, poultry and bird life co-exist and enjoy a habitat of plentiful, succulent vegetables, grain, water supply and native bush/shrubs.

One of the most significant features of David Odell's farm is his system of water harvesting from the natural run-off. A series of ponds and dams have been sited and constructed to provide sufficient water through the worst drought conditions.

The modified 'key-line system' which David uses emphasises both water harvesting and soil development.

If you would like to spend a field day in this delightful environment, come on Sunday 11 September. Paul Dann, a colleague of David Odell, will cover the theoretical application of organic farming in a morning session involving soil and pasture management, orchards, food production for humans and animals and siting of dams for efficient water use. The afternoon activities will be centered out in the fields where you will view and walk through the organic farm where David's vigorous enthusiasm and careful planning for long term self sustainability and seasonal conditions will be observed.

David is pictured at right with one of his delicious caulis.



Southern Adult Education Centres Inc.

Coming Workshops:

- . Sheep Crutching & Drenching
- Hall, 3 Sept.
- . Fencing & Welding
- Hall, 10 Sept.
- . Organic Farming
- Bungendore, 11 Sept.
- . Small Motor Maintenance
- Hall, 17 Sept.
- . A Writers' Retreat
- Wee Jasper, 17/18 Sept.
- . Bush Furniture
- Wee Jasper, 24/25 Sept.
- . Farm Diversification & Tourism
- Murrumbateman 9 Oct.
- . & a proposed Shearing Course
- (TBA)

Enquiries: Elizabeth Waddell
Phone: (06) 226 2223

Some Recipes Without Sugar or Flour

by Shirley Carden

Uncooked Fruit and Nut Slice

2 cups Sanitarium Puffed Rice slightly blended

125 gm butter melted 1 cup dried fruit

1 cup nuts blended 1 cup coconut.

Combine ingredients, press into lamington tin lined with foil, chill and cut into slices.

Banana Ice Cream

3 tbsp maple syrup or 2 tbsp honey slightly warmed

6 ripe bananas 2 tbsp carob powder

1/3 cup cold pressed oil 4 tbsp soy milk powder

1/3 cup water.

Blend ingredients and freeze. Dates or raisins (soaked) may be substituted for the carob.

Banana and Date Cookies

1 cup chopped dates 3 bananas roughly mashed

2 cups rolled oats 1/2 cup walnuts chopped

1/3 cup oil 1 tspn pure vanilla

Combine ingredients, let stand for half an hour, drop by the spoonful on greased tray, cook 25 minutes in a moderate oven or until brown.

Peanut Cakes

2 cups cooked mashed sweet potato

2 cups ground roasted peanuts

1 beaten egg 1 cup dessicated coconut

a little milk to moisten 1 cup sultanas (optional).

Combine ingredients, make into flat cakes and bake on a greased baking dish in a moderate oven until brown (about 30 minutes). Without the sultanas they are nice with cheese.

Gardens, Farms and Things

by Betty Cornhill

Recently I was up at the Watson Garden to do a bit of work with a friend, and we sat in the car to eat a bite of lunch before getting down to the serious business of actually digging.

We enjoyed the warm sunshine through the windscreen, munching and watching two young kookaburras fishing for worms in my first plot.

I had left two or three short stakes in the ground where they had marked some plant from yesteryear long since gone. These proved to be ideal for the fat young birds to sit and listen for the sound of a worm crunching up organic matter under the soil.

Suddenly he would pounce, extract the worm with his long, sharp beak, swallow it, and return to his listening post.

It was fascinating and somehow refreshing to sit and watch nature at work, so we took quite a while to finish our lunch and finally get to work.

The first thing we found was that something had chewed off the tops of all my cabbage, broccoli and cauliflower plants in one of my plots.

Thinking it might be the rat I had seen in the summer running near the plot, I set a couple of traps, but I had also seen a rabbit in my front plot, so I thought maybe this was the culprit. However, none of the plants in the front plot were damaged.

I have pondered this puzzle and come up with a possible solution.

A month or so ago I was at the hair dressers getting my hair cut, and looking down at the floor I remembered something I had read in a book called *Practical Organic Gardening* by Ben Easey.

This book, according to the dust jacket, "is the first standard textbook on organic gardening methods, which employ biological rather than chemical processes to raise crops of maximum vigour, health and nutritional value".

What I remembered was that hair is very high in nitrogen, and therefore good to put into compost. It is also slow to break down, and therefore provides slow release nitrogen.

On the strength of this I asked Vic what they did with all the hair, and he replied that they threw it away. I asked if I could have it, and as soon as my hair was finished he gave instructions for it to be saved for me to pick up on Friday.

Next thing was what to do with it, and because I was moving plants from another garden to Watson, I mulched every plant with hair, every plant that is, in the front plot, but did not have time to do the plants in the other plots.

Could this be the reason for the saving of the plants in the front plot?

I have been thinking of the fact that many people find it hard to find time to write articles for the *Quarterly*.

Before COGS got started I had my organic farm out near Murrumbateman. I was working flat out, doing marketing by phone in the morning, driving 30 miles out to the farm about mid-morning, taking some workers with me, usually, working on the farm until well after dark, loading firewood on the trucks, driving one of them back, delivering the firewood, often to Queanbeyan and once to Tidbinbilla, home again, preparing a meal, eating it, and then doing clerical work, accounts, writing letters to the Water Resources Commission etc., sometimes till 1 a.m.

Along with all this work was a terrific urge to spread the word about organic growing, to tell people about how chemicals were making them sick. I had plenty of time to think about these things driving out and back every day, unless one of the boys wanted to talk. Michael was a great one for talking and telling me how to run the farm, as he had helped his Dad on his grandmother's farm at Pialligo, before it had to be sold after her death.

Michael, at the age of three was left one day on the tractor while his Dad collected boxes of tomatoes for sale. He put the tractor in gear and sailed off down the road, to his Dad's consternation. Luckily a neighbour saw what was happening, leapt the fence, and stopped the tractor, so Michael was saved to help me on my farm at the age of 13.

It is often said that the busiest people are the ones who take on the extra load, and so I was constrained to help start COGS. And, because we had had one false start, I became the first president.

We've had a lot of ups and downs since -- once we only had 20 paid-up members, and I was told it was going to fold. I said "RUBBISH", and by the end of the year we had 90 members.

COGS has led the rest of Australia in a great many ways -- with the formation of the Organic Producers Council of NSW and ACT, which was started by Carl Hoipo, with backing from our president Rose Walters, and later from Shirley and Peter Carden, who eventually got me into it.

Another thing which was initiated by our first librarian, Gail Dadds, was the exchange of newsletters with other Organic groups all over Australia. She wrote to all these groups, and this with the job of looking after her house and family of, at that time 2 small children.

So all you busy people out there, write an article, telling us of your own experiences, however small they may seem to you, because they will interest and help other people, of that I am sure!



Good companions

Asparagus: tomato, basil, parsley

Beans: carrots, cabbage, cucumber, cauliflower

Broad beans: potatoes, lettuce

Bush beans: strawberries, grapes

Dwarf beans: beetroot, kohlrabi

Beetroot: kohlrabi, dwarf beans, onions, chives,

Broccoli: dill, celery, chamomile, sage, rosemary,

Brussels sprouts: potatoes, sage, hyssop, thyme,

Cabbage: beetroot, potatoes, beans, onions, sage,

Capsicum: basil

Carrots: leeks, lettuce, onions, peas, tomato,

Cauliflower: celery, celeriac, beans, oregano

Celery: leeks, beans, cabbage, tomatoes

Corn: melons, squash, pumpkins, cucumbers,

potatoes, parsnip, artichokes, Jerusalem artichokes

Cucumber: beans, peas, radish, celery, carrots,

Chives: carrots, tomatoes, parsley, parsnips, fruit trees

Eggplant (aubergine): beans, potato, marjoram

Horseradish: potatoes, fruit trees

Kohlrabi: beetroot, onion, dwarf beans,

Leeks: carrots, celery, celeriac, strawberries,

Lettuce: strawberries, cabbage, carrot, onions,

Nasturtium: cabbage, cauliflower, cucumber,

Onions: cabbage, carrots, beetroot, lettuce,

Potato: beans, corn, cabbage, horseradish,

Peas: carrot, corn, cucumber, beans, radish

Pumpkin: sweetcorn, marjoram

Radish: cucumber, lettuce, kohlrabi, melon

Spinach: broad beans, strawberries, fruit trees

Tomato: asparagus, basil, lima beans, cabbage

***Zucchini:** corn, marjoram, nasturtium

Bad companions

Potatoes

Leeks, chives, garlic, onions

Fennel

Garlic, onions

-
Runner or climbing beans, lettuce,
silverbeet, cabbage, leaf mustard
Tomatoes, strawberries
oregano

Strawberries, rosemary

Tomatoes, garlic, strawberries

celery, dill, mint, thyme, oregano

-
Dill, parsnip, chives, sage, rosemary, radish
Strawberries, rue
peas, potato, nasturtium
Parsnip, potato, wheat

-
Potatoes, sage, sweetcorn, cauliflower, basil

-
Pole beans, tomatoes
cucumber

-
onions, parsnip

Parsley

beans, beetroot, parsnip

-
broccoli, Brussels sprouts, potato,
radish, squash, zucchini, fruit trees
Beans, peas

parsnip, parsley, leeks

Pumpkin, squash, cucumber, dill, eggplant
(aubergine), tomatoes, raspberries

Onions, garlic, shallot

turnip

Potato

Hyssop

squash, peas, nasturtium

-
Beetroot, fennel, kohlrabi, broccoli,
Brussels sprout, cauliflower, potato,
rosemary, carrots, chives, dill, onions,
parsley, parsnip, nasturtium

Artwork and text by Lydia Waldron

Warm Winter Gardening

by Lydia Waldron

HAPPY CRESS HAIR:

Line eggshell with a little moist blotting paper. Can sow cress or radish seeds. Happy Cresshair will need a haircut soon!

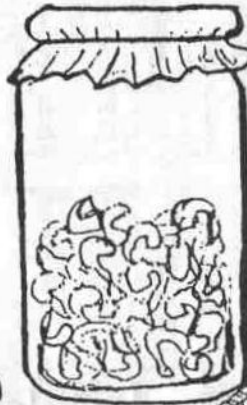


A hollowed out potato will happily support the growth of cress, radish, wheat (or even grass seed if your diet is more agrarian)

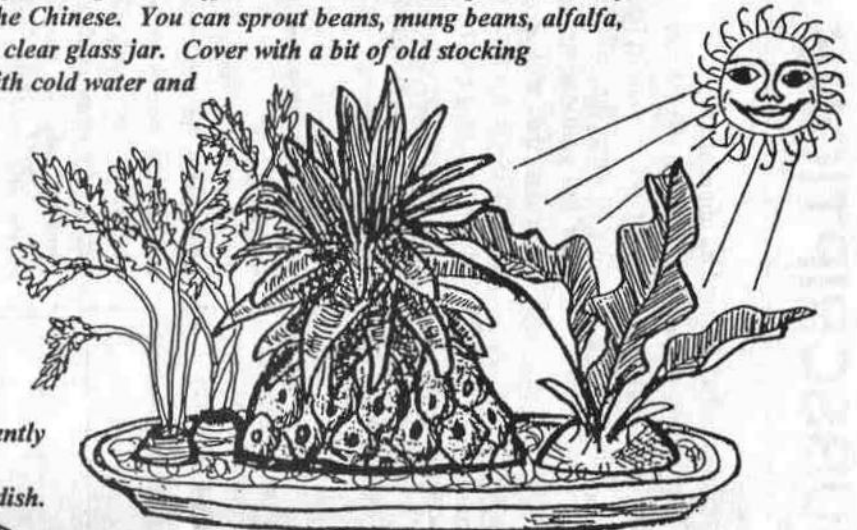
BEAN SHOOTS OR SPROUTS:

are one of the most distinctive and best-known chinese foods. Grown in China for many centuries, they were a staple food for sea travellers and provided a fresh vegetable sufficient in vitamin C to prevent scurvy. This disease was the scourge of Western sailors, but unknown to the Chinese. You can sprout beans, mung beans, alfalfa, lentils etc. Wash about 2 tablespoons in cold water and place in a clear glass jar. Cover with a bit of old stocking secured with elastic band. Two or three times a day wash seeds with cold water and

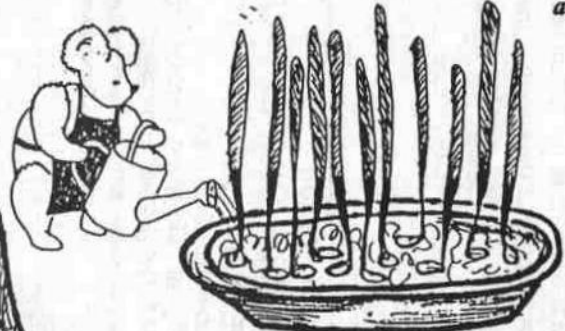
strain through muslin so that seeds are only dampened not floating in water. Within 4 - 6 days seeds will swell then develop leaf & form tiny roots. Keep up washing routine. After 8 - 10 days the sprouts will have grown sufficiently to be eaten fresh or in a Chinese dish.



Daffodil & hyacinth bulbs, onions, potatoes and sweet potatoes can all be successfully grown in a wide-necked jar of water and wedged in place with toothpicks. Ensure that the base is in contact with the water and that the jar is placed on a sunny windowsill.



The tops of carrots, parsnips, beetroot and even pineapple can form rootlets if placed in a saucer of water with a little of the base attached. The well-rooted pineapple top is a formidable beastie that will continue to flourish indoors if later transplanted into a small pot with soil potting mix added.



UNPOLISHED RICE will even shoot if placed on moist cotton wool in a location with adequate light and air. Moisten cotton wool every 2 days. Rice will geminate (shoots appear) within 4 - 5 days.

COGS NOTICEBOARD

AUGUST GENERAL MEETING: QUIZ NIGHT

An organic gardening quiz night competition will be held at the August General Meeting, Tuesday 23 August, 7:30 pm, Room 4, Griffin Centre. **Prizes and Trophy to be won!** Organize teams of 4 (guests welcome) or come along by yourself and join a scratch team.

Please bring a plate for Supper, & BYO soft drink

For more information contact organizer **John Ross** (ph 241 4063).

Visitors are most welcome.

PRIZES FOR QUIZ NIGHT: Members are invited to donate items (e.g. seeds, plants, etc) for Quiz-Night spot prizes in addition to the main prize & trophy. Contact organizer **John Ross** (ph 241 4063).

NEXT COMMITTEE MEETING:

Tuesday 30 August, 7:30 pm, Environment Centre.

VACANCY -- COGS SECRETARY

The position of COGS Secretary is vacant. Members interested in this important job please contact **Michelle Johnson** (ph 231 6219).

SEPTEMBER MEETING: Tuesday 27 September, 7:30 pm, Griffin Centre. Speaker: **John Betts**, Yass Landcare
Topic: "Landcare Projects in Our Area".

OCTOBER MEETING: Tuesday 25 October, 7:30 pm, Griffin Centre. Speaker: **Esther Dean**, topic TBA.

SEED EXCHANGE:

If you have an excess of seeds of your favourite non-hybrid vegetables or flowers, please remember the COGS Seed Exchange and bring some along to our Seed Librarians to share with other members.

Anyone willing to help clean seed (and learn how to do it in the process), please contact **Marjatta Asa** (ph 249 7406) or **Barbara Schreiner** (ph 248 8298).

SPEAKERS AVAILABLE: COGS will endeavour to make speakers available to interested groups in the Canberra region. Please contact **Michelle Johnson** (ph 231 6219).

THANKS TO SMITHS ALTERNATIVE BOOKSHOP:

Many thanks to **Smiths Alternative Bookshop** (Alinga St, Civic) for their generous donations of prizes for our book raffles. Proceeds go toward purchasing books for the COGS Library. We ask members to show their appreciation by supporting Smiths Books.

JOYCE WILKIE'S RADIO PROGRAM:

Don't forget Joyce's regular session with Elaine Harris on radio 2CN, the first Friday of every month, 1:30 pm to 1:50 pm.

COGS MULCHERS:

The two COGS mulchers are available for use by COGS members. Enquiries to:
John Ross (Northside, including Queanbeyan & Bungendore) ph 241 4063, and
Richard Blyton (Southside) ph 231 6219.

FORUM: PESTICIDES AND ORGANIC FARMING:

Saturday 20 August 1994, University of Western Sydney... see notice this issue of COGS, p. 11.

PUBLIC MEETING - NORTH BELCONNEN LANDCARE GROUP:

Wednesday 24 August, 4:30 pm Mount Rogers Community School, Spence...see notice this issue of COGS, p. 21.

WORKSHOPS & FIELD DAYS:

Keeping Free-Range Poultry, November -- see notice this issue of COGS, p. 14

Herb Growers Workshop, 24 & 25 September -- see notice this issue of COGS, p. 21

Organic Farming, & other topics: various dates -- see notice this issue of COGS, p. 22

IFOAM CONFERENCE, CANTERBURY NEW ZEALAND:

11 - 14 December 1994 -- See notice this issue of COGS, page 19 for tours available in New Zealand.