



LETS keep trading

By Susan Wise



We are living in interesting times. Our global economic system is on very shaky ground and the economic, political and social implications may be far-reaching. The capitalist monetary system is under threat and the future feels uncertain. In this context, the benefits of a complementary currency system, such as LETS, are being demonstrated convincingly in the Greek port city of

Volos where an alternative currency was introduced. This grass-roots initiative has grown into a network of more than 800 members, in a community struggling to afford items in Euros during a deepening financial crisis.



<http://www.bbc.co.uk/news/world-europe-17680904>

...continued on page 4

e-News contributions welcome

PermacultureWest e-News is actively seeking articles. We welcome any information or events you would like to share with the community. If you would like to contribute please contact enews@permaculturewest.org.au or contact Jo on 0421 589 548.

THIS ISSUE

1. LETS keep trading
2. Care of people
4. Co-convenors' report
5. Discovering the joy of community
6. Pest management
12. Tips for organic control of fruit fly
15. Towards a National Food Plan for Australia
16. Letters from Lesotho #2
17. Follow up on Hugelkultur wicking bed trials
18. Joel Salatin lecture
19. BioFertile Farms workshop

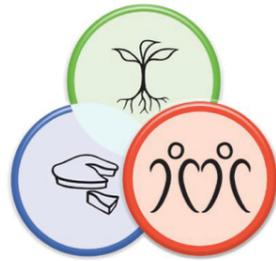
Care of people

If people's needs are met in compassionate and simple ways, the environment surrounding them will prosper.

The icon of the two people together, represents the need for companionship and collaborative efforts to affect change.

Care for people starts with ourselves, but expands to include our families, neighbours, local and wider communities. The challenge is to grow up through self-reliance and personal responsibility.

Self-reliance becomes more possible when we focus on non-material well-



being, taking care of ourselves and others without producing or consuming unnecessary material resources. By accepting personal responsibility for our situation as far as possible, rather than blaming others, we empower ourselves. By recognising that the wisdom lies within the group, we can work with others to bring about the best outcomes for all involved.

The permaculture approach is to focus on the positives, the opportunities that exist rather than the obstacles, even in the most desperate situations.

Text and images courtesy of www.permacultureprinciples.com/

...continued from page 1

In the traditional system when money becomes scarce the level of trading declines, forcing businesses to make cutbacks and people to lose their jobs. As the cost of living increases, our budgets get tighter. Many of the escalating outlays are fixed costs such as electricity and rent. These expenses can only be paid for in cash, which depletes our budget significantly.

This is where LETS shines! It provides an array of goods and services for which we don't have to find cash. Alternative economic systems such as LETS don't substitute the conventional system but complement it. LETS fills a gap where the current system fails us. It is especially useful in times of high unemployment. It has been adopted in a growing number of Transition Towns.

In the LETS community, the measure of exchange is often human resources (time, skills and energy); something we have as much access to as we choose.

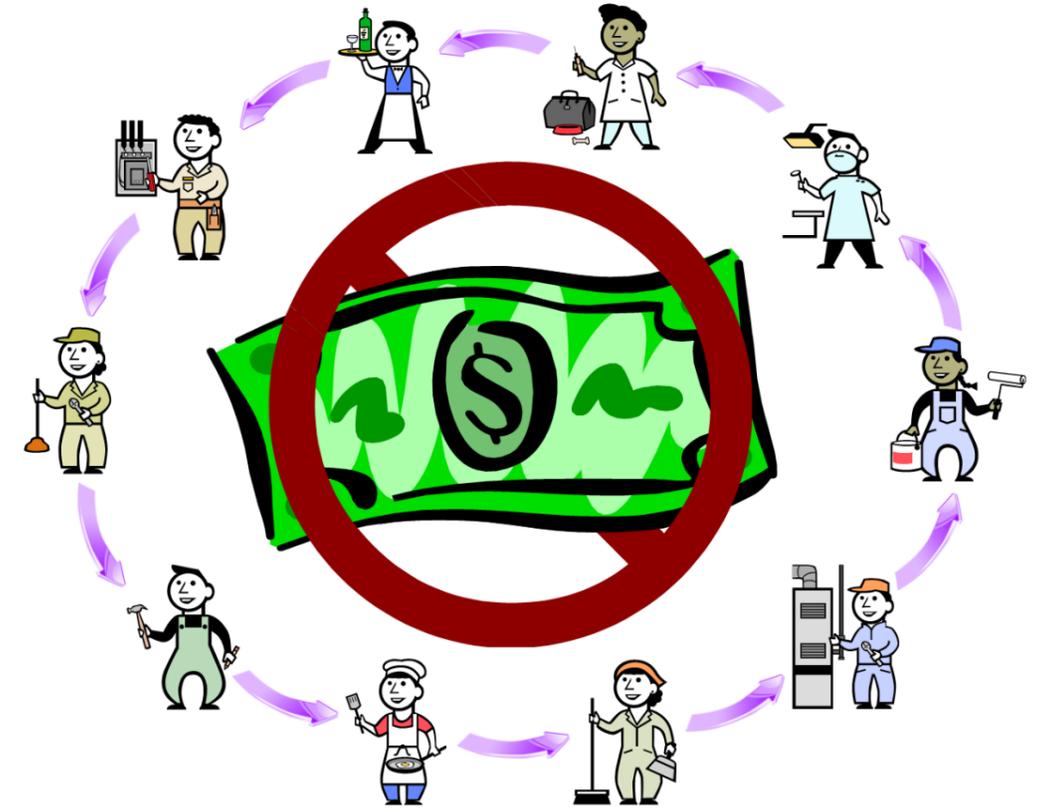
Earning credits is much easier than earning money. Many goods and services provided on LETS do not easily attract a monetary value in conventional society. Examples are working bees, home-made food, driving other members to do their shopping, handmade arts/crafts, hire of household items.

In fact, members can find just about any way to earn credits, which they can trade for other goods and services. Members who find themselves struggling in the monetary system have more opportunity to continue trading through LETS.

When times are tough, LETS also enables us to keep enjoying some of the less essential goods and services that we would have to forego if limited to our

money supply such as a lovely piece of jewellery or a heavenly foot massage.

Global financial crises mean that money may be in short supply. But human capital is not. Naturally, the system will always operate at its best when it has lots of resourceful members, which is why LETS is always happy to



welcome new participants which help the community to grow stronger and provide even more goods and services that are able to be traded without the need for money. Membership of Perth LETS is free.

Join online via ces.org.za

The benefits of a LETS community are many and extend beyond the economic, but particularly in times of economic instability, LETS provides a valuable financial management tool. And the more powerful the tool, the greater the benefits we will all reap from it.



Kambarang

Noongar seasons

Warming, with rains finishing. Longer dry periods and fewer cold fronts cross the coast. The height of the wildflower season. Noongar moved towards the coast where frogs, tortoises and freshwater crayfish were caught.

Co-Convenors' report

I hope everyone has by now booked the date for PermacultureWest AGM on 21 October at City Farm, and is as eagerly awaiting the workshops, Edible Weeds and Foraging, and basic Rocket Stove Building, as I am. You can get a sneak peak at the weeds info and some plants at the Royal Show in the Conservation and Land care section where Michele Kwok has set up a fantastic Permaculture and Friends stand. See you at the AGM and many of you at the Joel Salatin workshop the day after.

There are a few big changes happening as we streamline joining and communication with the permie network, and suspend the monetary barriers / justifications of ongoing memberships and renewals.

Remember you can purchase discounted tickets to Joel Salatin at www.hdworldevents.org/products/candlelight-farm-alumni-ticket

This weekend Freo permies are having a stall at the big South Freo markets on 7 October from 9am -1pm. They will be running a free seed saving workshop at 10.30am, and will be talking to the community about the community seed bank they are propagating. If you would like to be involved you can help in a number of ways - volunteering on the day, bringing seeds to donate on the day, and spreading the word.

Changes to PermacultureWest

There are a few big changes happening as we streamline joining and communication with the permie network, and suspend the monetary barriers / justifications of ongoing memberships and renewals. Involvement with the committee will be both less demanding and more socially enjoyable this year, as we are all experiencing the growing demands of just making ends meet for ourselves and family.

To achieve this we will be moving to quarterly weekend gatherings to replace the monthly meetings and quarterly editions of the fantastic eNews, making it easier and more enjoyable to join the committee and help out when you have some spare time.

We would love to have some new faces on the committee as some of us will be stepping down.

The PermacultureWest committee recently elected to remove joining and rejoining fees, (\$0 to join and automatic renewal in June) to be re-evaluated next June. So while many of you would have expired membership in June, all past members are now current, as the renewal fee has been waived.

While PermacultureWest still has insurance for local groups and events costs (\$800 /year), event support / media costs (printing) and some overheads, we would prefer to operate via local group and member donations and the crowd-funding of a specified cost.

So grab this opportunity for free membership if you haven't got on our mailing list yet.

It has been a big year for permaculture as the general public gravitate (or more concerning, are financially forced) into a low cost, healthy, sustainable and ecological lifestyle.

While this is great, we all have less surplus to share, so there is even more need for PermacultureWest to remain an active and efficient educator, and energy pathway for people to find their local groups and rebuild themselves and their communities.

Cheers,
Charles Otway

From the editor: Discovering the joy of community



I recently had the pleasure of hosting the Hills Local Permaculture Group (HLPG) at "Edgefield", my home in Mundaring. Each month, the HLPG meets and undertakes a mini-permablitz at a member's house or some other activity-based venture or tour. It's a social affair that includes a shared morning tea and, often, a seed swap.

I've only been in the Hills since the beginning of the year and joined the HLPG as a way of meeting like-minded, local people and, hopefully, making new friends. Until recently, "community" was not something I'd ever experienced before. It was a nebulous word, which never played a large part in my life, or I in it. But in the years since I've had children, discovered Permaculture and moved out of the city, I feel like I've been undergoing a slow transformation in ideas and actions.

Having six virtual strangers turn up at my house and offer me their time, energy and goodwill, expecting nothing in return, was a revelation in so many ways.

We only worked for a little less than two hours but what a difference six extra pairs of hands made! We fenced off a number

of garden beds from marauding free-range chickens and kangaroos, prepared and planted a new garden bed with beans and sweet corn, and laid some dripline irrigation.

Thanks to all those who came along and made me feel more a part of this community. I look forward to returning the favour.

Cheers,
Jo Thierfelder



Contributions to eNews are welcome. Please send your articles to: enews@permaculturewest.com.au

Pest management in the garden

Sprays both chemical and organic kill indiscriminately

Pests are nature's cleanup crew. They are one of the mechanisms of ensuring the best, strongest, most suitable plant species are growing in a specific area.

Where there are pests there are their predators, many are small and difficult to detect, and when you spray you will kill both and destroy the natural order and balance that was trying to occur.

To effectively get nature to control your pest you need to encourage a huge variety of creatures. This is achieved by creating diversity of plants and micro-landscapes providing shelter, pollen, nectar, and by not spraying, to ensure a few pests to be there so the predators have got lunch.

While this might seem unrealistic to those who fall back on sprays frequently. Start with this simple solution, if you don't have the time or size of garden to reach this ecological equilibrium use exclusion techniques not spray.

Simple and ecological pest management techniques

1. Start by exclusion meshing (Vegenet/fruit flynet) small areas of high yield vegetable growing beds. You will get a yield and be encouraged and fed, but at a high \$ cost.
2. Then install and grow your ecology, pack in all the Biomass, Habitat, Predator Food plants you have space for.
3. Use species diversity, inter-planting, companion planting to expand the garden.
4. Start planting high yield veggies in these areas without exclusion mesh, brassicas are a great option, observe, accept some losses, pests need to breed up before predators will come for the food source.

Pests are a normal part of every garden. They come and go with the seasons without really causing too much drama.

In healthy gardens, they are kept in check by birds, frogs and lizards as well as beneficial predatory and parasitic insects. The simple best preventative management is growing healthy, mineralized soil to keep the plants in good shape, because weak, sick and stressed plants are more prone to attack. Cultural practices like crop rotation, companion planting and my preference, diverse inter-planting, further reduce the risk of attack.

Laborious and expensive traps and barriers should be saved to protect vulnerable plants such as seedlings, and high yield juvenile vegetable garden beds.

Why do we get pests?

Pests are nature's cleanup crew. They are one of the mechanisms of ensuring the best, strongest, most suitable plant species are growing in a specific area.

In short, if you have insect pests you have plant/soil problems. Address those rather than the pest.

Pests are drawn to weak plants or plants with surplus sugars on their surface caused by sickness or often excess nitrogen creating excess plant tissue. This gives off a signal to the insects that it's dinner time as things are out of balance and need to be fixed, which may or may not end up in the plants death but will certainly see it attacked.

As with all things, a balance, of nutrients in the soil and thus the plant, is critical for pest resistance.

Know your pests and how they work

Locally expanded from Garden Australia info.

Scales and aphids

Scales and aphids shoot a sweet substance called honeydew. Ants literally

farm the scale to feed on the honeydew. They'll pick them up and they'll move them all over the tree. Honeydew also leads to sooty mould, a black dusty fungus that grows over the leaves and stems. Controlling the scale will also get rid of the sooty mould. Controlling the ants is an essential aspect in avoiding rapid expansion of scale on the host plant and those surrounding. Vaseline around the circumference of a plant (placed on top of a tight tape/barrier, as the vaseline can ringbark some plants) will stop ants as long as the plants is not accessible via other routes. If you only have a small amount of scale, scrape it off with a fingernail or toothbrush. Larger infestations can be controlled by spraying with an oil to suffocate them but if practical a heavy prune of the plant is more practical as the scale is there because the plant is under stress/old/etc.



Mealy bug

Mealy bug (white fluffy scale) is another common sucking insect. Mealy bugs like sheltered conditions and are commonly found on plants under patios, in glass and shade houses as well as indoor plants. Being sap suckers, they cause the leaves to wilt and distort. They also produce honeydew, which leads to sooty mould fungus, also farmed by ants. The big ones can just be squashed with your fingers, but dab the little ones with methylated spirits. This dissolves the waxy coating, which causes them to dehydrate and die.

Citrus leaf miner

Citrus leaf miner is a common pest during summer and autumn affecting all citrus. The larvae tunnels in the leaf, forming a squiggly silvery window pattern. When it's fully grown, it curls the edges of the



leaf together and pupates to emerge as a small moth about five millimeters in length. The moth is only active at night, so it's rarely seen and its life cycle may take as little as three weeks. The leaves often become severely distorted, which can stunt growth and reduce yield, but rarely kill a tree. Damage is normally on new sappy growth and can be controlled by cutting off and destroying the damaged parts. Citrus leaf miner like warm weather, so fertilise citrus at the end of autumn and in early winter so the new growth won't be attacked. During warm weather, you can also protect new growth by spraying with an oil spray, similar to that for scale.

Slugs and snails

Slugs and snails are common garden pests and can cause damage, particularly to young seedlings, but it's surprisingly easy to keep numbers down. Set some beer traps. Just half fill a jar with beer and lay on its side, where slugs and snails are likely to strike. They will be attracted to it. They'll crawl in there for a drink, get drunk, and die. It's also a good idea to lay traps in cool, damp places where snails hide. If you can't stand to waste beer, try coffee spray.

21-spotted lady bird

A dull orange large lady bird with a long head compared to others, identify it in a book before you start squashing them. If you have a Solanum (Eggplant, Spuds etc) or Cucurbit being eaten to bits and its covered in big ladybirds they are most likely 21 spotted. Collecting and squashing early in the attack is best.

Caterpillars

Caterpillars are another very common pest, the common white butterfly is the most obvious targeting Brassicas and

Citrus leaf miner like warm weather, so fertilise citrus at the end of autumn and in early winter so the new growth won't be attacked.

other plants with medium sized green caterpillars. But there are many types of moth (night time) and butterfly (day time) larvae that feed on our vegetables and natives. The best control is wasps, birds, prey mantis and the many species specific tiny parasitic wasps. A good ecologically diverse garden should not have a caterpillar problem. Try planting mustard densely in winter as a trap crop to inoculate the soil, breed up the caterpillars and thus breed up the predators. Once the mustard has flowered and feed nectar to the predators, mulch make the predator look pests on the rest of your new spring seedlings for their lunch.

Nematodes cause lumps and round bumps on plant roots, similar to the nitrogen nodules on a legumes roots.

Pear slugs

Similar to caterpillars above, they target plums, pears, almonds, cherries, etc, putting chickens under your trees will break the life cycle as they pupae in the ground. If this isn't practical dust the tree and slugs with ash, spray off with high pressure or use a BT (Bacillus Thuringiensis) i.e. Dipel spray.

Eggplant Caterpillar

More like the fruit fly below, it is a tiny moth with boring grub, and it has no effective control measures at this point other than exclusion. Luckily the Solanums it targets (Eggplant, Tomatoes, Potatoes, Capsicums/Chili's) don't need insect pollination so can be continuously exclusion meshed. Plan this aspect into your crop rotation and bed plantings now.

Fruit Fly

While there are many traps and baits for fruit fly and I will list a few in the Organic Spray section, basically fruit trees or at least the fruit need to be fruit fly netted. Aiming to keep smaller trees at 2m height in intelligent groupings of plants that need to be netted after pollination is essential. One fruit fly can sting your entire crop by itself, so trapping while reducing the number and worth doing, is not a good way to protect your crop. Commercially they spray poison every few days on the surface of the fruit as the only control that works. The simple solution for the home gardener (to costly for commercial orchard) is Fruit Fly mesh,

or individual bagging of the fruit (calico and other non transparent material work fine). If you have rats a strong, smell proof cover might protect your fruit from them as well.

Nematodes

Nematodes cause lumps and round bumps on plant roots, similar to the nitrogen nodules on a legumes roots.



While the soil pest can make gardening hard for a period, the cause is the soil not the pest. Root knot nematodes (note there are 1-2 bad nematodes and 100's of good ones) like dry sandy conditions, so add lots of compost and keep the soil moist and ,mulched (like you should anyway) and they will move away. While people suggest marigolds and mustards to be grown and turned into the soil to fumigate the soil, this may discourage all nematodes. Good nematodes eat bad nematodes, and black scarab beetle larvae, weevil larvae, mole crickets and fungus gnats, so you want to keep your good ones around.

Mice and rats

Mice and rats can wreak havoc on crops. They can be controlled by normal baiting though that is not recommended as the animal becomes a toxin to the garden/

world. Traps include, snappy ones, cage ones, rubber ring ones, and home made slippery bridge water buckets. Or hopefully nature will take its course and your glut of vermin will feed some endangered owls, reptiles or even neighborhood cats. Exclusion or natural predation is often not practical so I look to reduce the numbers myself.

Parrots

Parrots as above, beautiful birds they may be they often ruin a fruit tree crop in one sitting. Bird netting is the most effective and cheap, but if you are in Perth you should just use fruit fly net and achieve all the needs with one product. Scarers, flashing objects and scarecrows etc might work for a while but end up scaring more predator birds than parrots so your system loses in the long run. NOTE: If using parrot mesh around trees ensure it is off the ground and attached to the tree trunk, reptiles are easily caught in the net and die otherwise.

Pests are part of nature and they will always be there. As permaculturists, we need to replicate nature to ensure our 'simulate eco-systems' (natural and cultivated) are strong and resilient and we do that by following nature's example.

Habitat creation techniques

Ponds

Ponds (small as you need it to be) are essential to provide an accessible safe water source for most of your predators. Birds, frogs, wasps, and many other of the most effective pest eaters need water in your yard to be able to eat your pests. A pool is not useful by itself as it becomes a hazard and toxin for the predators and bees and other garden helpers. A well vegetated pond or large wine barrel/blue barrel will require little care, no aeration, provide a yield of food and mulch, and



create this water source habitat that you must have. See the PermacultureWest website for pond designs.

Logs and rock piles

I have observed a huge increase in skinks where I have piled, bricks, wood, stones etc in a warm spot. They breed up fast a eat bugs all day. Keeping the spots warm and dry keeps out the slugs and snails.

Holes and stick bundles

Drilling holes of various sizes in any dry hardwood will provide a home for many predatory wasps and native solitary bees species. You can add it as a feature like Josh Byrne did recently on Gardening Australia or just start drilling all the suitable dead wood around your yard. Another method for breeding lacewings and other predators is making bundles of trigs about Dring Bottle size and either wiring them together or pushing them into a piece of PVC water pipe. Providing a dense dry and physically size restricting space will make homes for many helpful predators.

Biomass stacking and storage

The simplest way of getting life in your garden is stacking it with Biomass. By biomass I mean any organic healthy material, carbon and organic matter is the food of soil bugs, these soil bugs if feed breed up in their millions and develop your soil and kick start your

Drilling holes of various sizes in any dry hardwood will provide a home for many predatory wasps and native solitary bees species.

ecosystem. The best thing you can do is lay 10-15cm deep tree pruning mulch everywhere and stand back and let nature show you how.

Plants in pest control

While I use and encourage replacement of annual high labor crops, with perennial long term plants, one of the problems with perennials can be that they grow in the same ground and harbor the same pests all year round, i.e. Kale and Whitefly. Longer term observation of this 'problem' shows it again is just part of the ecology, as with the continuous supply of pests (food) there will grow a residential colony of predators.

Pest management in densely populated areas has its limitations, and effectively in Perth for guaranteed harvest soft fruits, and most solanaceae we will need to use insect exclusion mesh/net now as a control measure for fruit fly and Eggplant Caterpillar. While permaculture offers lots of solutions to these pests most are unmanageable in an urban yard with careless neighbors and breeding grounds all around you.

Pest controlling plants come under three categories: those that repel or confuse pest insects with strong scent, those that attract beneficial insects, and those that distract pests as an alternative food source.

Pest repellent plants

Pest repellent plants actually work in three different ways.

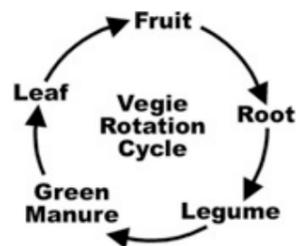
1. **Masking** plants include thyme, lavender and scented geranium. These produce strong, volatile oils and scent that actually masks the plants the insects might be looking for.
2. There are also **repellent** plants such as cotton lavender or santolina, tansy and wormwood. These plants produce a scent or taste that is so bitter or putrid it drives insects away.
3. Finally, there are **plants that contain natural toxins or poisons** which can be used to make sprays or washes. These include fennel, which can be used as a flea repellent for animals,

feverfew, or chamomile, which can be used as an anti fungal agent, and the dried flower of pyrethrum or chopped chilli, which can be used as insect sprays. Rue, Jicama Bean and Tobacco are some others.

Repellent plants

Tansy is terrific at repelling ants and flies so you might want to plant it outside your back door or near windows. But pick the leaves and rub them on the back of your cat and dog because they'll actually get rid of fleas. Lavender, which has an incredibly strong scent, can be planted to protect nearby plants from pests such as white fly, and it's also used to mask the scent of roses from aphids. Basil is another companion plant that is often used to repel aphids. But if you grow a pot near your barbecue area, it will also keep away flies and mosquitoes. Sweet marjoram is often planted near gardenias or roses so that its strong scent will mask or confuse pests attracted to their flowers. Plants such as elder, dill and fennel all have umbels made up of hundreds of little flowers, and these are grown to attract hover flies, which eat other pests in the garden.

Wormwood has a strong pungent scent that's fantastic at deterring insects. I've used it around our vegetable patch and it's really good at keeping away white cabbage moth, and it makes a great nesting material for chicken laying boxes.



Plants that attract beneficial insects

Plants that attract beneficial insects, are many, often it is the flowering that is the main attractant and those herbs and plants with the smallest (to us insignificant) flowers are the best. If you plant Salvias, Sage or Rosemary, are hardy helpers. Carrot flowers, Rue, Sow Thistle, Parsley, Holy Basil (Tulsi), borage, elder, dill, coriander and fennel plants have flowers that attract insects (normally by providing nectar) that prey on other pests in the garden. Predatory insects to look for and encourage include Assassin Bugs, Hover Flies (larvae), Lady Birds, Robber Flies and Praying Mantises.

Let some of your vegetables go to seed, while they are setting you seed they are providing food with the flowers. Members of the cabbage family are magnets for pollinators. Their simple flowers are full of nectar and pollen. Another example is the flowering turnip, Mizuna and also Mustard are wonderful. But apart from pollinators, they'll bring in beneficial insects like Lacewings and Hoverflies and they're really important for controlling aphids.

Plenty of cottage garden flowers are also extra helpful attractants so choose those to brighten up your yard, golden Rod, cosmos, pineapple Sage, phacelia and alysium are easy and self-seeding.

Planting many of these flowers, herbs, trees and letting in your veggies go to seed often in the garden will not only diversify your design, but also add attractive, interesting and aromatic elements to it.

Techniques - Recap

Food production and protection techniques that, depending on your system, can be utilised include; crop rotation, companion planting, guilds, and Integrated Pest Management as mentioned previously.

Crop rotation involves changing where types of plants grow each season to break pest cycles, utilised soil nutrients, vegetatively build soil, and allow focused heavy cropping of target annuals. Crop rotation normally involves several garden beds, four or more, where each bed sees

a continuous rotation of legume, green manure, leaf or fruit and then root crop. Variations are made based on desired crops and number of beds. Crop rotation becomes difficult and ineffective the more you move into perennial food crops and ideas like forest gardens, at that point highly diverse guilds and natural succession and seasonal

Companion planting, inter-planting and guilding is about creating a polyculture of vegetables, herbs, dynamic accumulators, shade and structure species and perennial food crops in a garden bed, micro climate, limited space. Typical companions of Tomatoes and Basil and the three sisters corn, squash and beans, are mentioned a lot, but it is more about planting plants that have growth habits and mechanisms that are not antagonistic to each other.

An excellent companion planting chart is at <http://permaculture.org.au/2010/07/30/companion-planting-guide/>

As much as people want to structure their garden and zones with fixed permanent landscaping, an ecological garden is always evolving, and succeeding in a cyclical improving dynamic system. Don't fight the pest or the change, but observe and use it to your advantage.

Fruit Fly is a seasonal pest currently. As discussed I recommend, keeping your fruit trees small, compact, and low so you can net them and reach the fruit. Young trees just starting to set fruit or trees that have a few large fruit or bunches can be kept safe by netting each one with a separate bag (calico, organza bags, sewn curtain material etc), and fruit trees with many fruit (apricots, nectarines, etc) should be netted using a larger fruit fly net.

Trapping fruit fly should be done, but it is to help reduce the numbers not to save your fruit, one fly can sting all your fruit.

Companion planting, inter-planting and guilding is about creating a polyculture of vegetables, herbs, dynamic accumulators, shade and structure species and perennial food crops in a garden bed, micro climate, limited space.

Tips for organic control of fruit fly in the home garden

Article courtesy of Green Life Soil Co.

If you grow fruit, it is your responsibility to actively control fruit fly in your backyard and the Agriculture Department can enforce this.



Fruit fly are an incredibly annoying pest - they can destroy a range of fruit and vegetable crops in a very short space of time. It is heartbreaking to be nurturing a fruit tree for years, sustained by the anticipation of your first juicy fruit only to have your dream shattered by a tiny, flying bug and its larvae.

If you grow fruit, it is actually your responsibility to actively control fruit fly in your back yard. The Agriculture Department can enforce this, particularly if you are located near commercial growers. As a child, I remember inspectors visiting in suburban Perth.

Unfortunately Fruit Fly are very difficult to control using purely organic methods; however you CAN help keep numbers down, and we will try and give you a few ideas which should help you enjoy the fruits of your labour (excuse the pun).

Know Your Enemy

Queensland Fruit Fly were eradicated from Perth in the 1990's. The common

Fruit Fly we get here in the west is the Mediterranean Fruit Fly (see picture), thought to originate from tropical Africa, and was first detected in WA in Claremont in 1895.

The activity of Medfly depends on the temperature. In late spring, summer and autumn they are most active around Perth. Over winter, the fly may become inactive in the cold, however they can survive through this season in all stages of their life cycle, and when temperatures begin to warm up, new adults begin to emerge from their pupae in the ground, and surviving adults become active. Adult Medfly typically live for two to



three months and are often found in foliage of fruit trees. As long as fruit is available, they tend not to spread further than 20 - 50m from their place of origin.

After mating, females will search for a suitable host in which to deposit her eggs. Soft fruit (such as apricots) are more preferable than harder fruits like apples and pears, but where populations are higher or there is a lack of preferred fruit, a much wider range of fruits can be infested.

The larvae (maggots) will hatch within two to four days. These little white grubs start out 1mm long but grow to about 8mm long, and are what most people recognise as fruit fly. Their activity causes fruit to rot and spoil. Once fully grown, the larvae leave the fruit, and burrow into the soil to pupate. The pupae resemble a small brown capsule about 6mm long. The pupation stage varies with temperature. It lasts around two weeks in summer, and can be about seven weeks over winter. Eventually the adult emerges from the pupal case and burrows up through the soil.

Here are the main methods to control Medfly.

Cover sprays

These are non-organic and I believe there are only three commercial insecticides registered for use in Western Australia. Unfortunately for economic reasons commercial fruit is sprayed routinely.

While we always recommend organic gardening methods, in extreme cases we recognise it may be necessary to use pesticides. Hopefully once you have a severe outbreak under control, in future years you can practise less drastic control methods.

ALWAYS read labels, follow instructions concerning withholding periods and NEVER use more than the recommended application rates.

Foliage / spot sprays

The spray is NOT applied to the fruit, but on the trunk or foliage of the tree. It is claimed that spraying on 1m² area of foliage, or on a board which is then hung in the trees will control fruit fly

for a 50m² area. These sprays contain a fruit fly specific protein attractant, and an insecticide which will kill the fruit fly when it eats the protein.

We stock Eco-Naturalure which is Certified Organic by BFA.

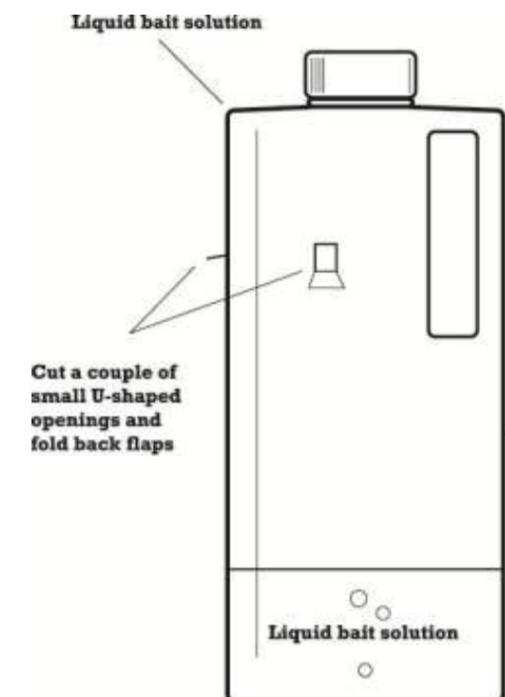
Another product on the market is Yates Nature's Way Fruit Fly Control. Although not organic, it is claimed to be low toxic and also has no withholding period.

Traps

A number of different types of traps and baits are available for Medfly. Some are pheromone based and will attract either males or females, depending on the product. Other baits or traps are based on a food source, and will attract both sexes, and possibly a number of other insects (both 'good' and 'bad') which will also die once captured.

Traps can contain a bait and an insecticide, or they can be a simple 'wet' trap, where insects enter but then cannot find their way out, and will eventually drown in the solution.

Traps are not considered to be hugely successful in controlling large numbers of Medfly, but they will certainly HELP, and can also help show the numbers of Medfly around, so if you DO choose to spray, you can do so at the most effective time.



Foliage or spot sprays contain a fruit fly specific protein attractant, and an insecticide which will kill the fruit fly when it eats the protein.

Netting trees is also effective providing you can cover the tree to ground level, which has the added benefit of keeping birds away.



Commercial traps and baits are available to purchase (we have both available in stock); or you can very simply make your own; as per the diagram. (The diagram shows a 2L bottle with handle - but any plastic bottle will do!)

What you choose to use for bait is up to you. If you look on-line, there are a huge number of suggested recipes, many of which can be made from things you will already find in your cupboard. Here is one to try:

- 1L hot water
- 1/2 tblspn Cloudy Ammonia (available at supermarkets in the cleaning section)
- 1/2 tspn Vanilla Essence
- 100gm Sugar
- 1 tspn Dishwashing Liquid
- 1 tspn Vegemite

Dissolve the sugar and Vegemite in the hot water. Allow to cool before adding in remaining ingredients and mixing. Makes enough for approximately three to five traps.

Use between three to six traps in and around each tree (hang amongst the foliage), and replace the baits every two weeks at least, or if they become full of flies, or the liquid evaporates too quickly. Baits which are too low or diluted with rain will be less effective. If you are using a non-toxic bait, you can dispose the trap contents into the chook pen - fowls are quite appreciative of the protein!

Traps can also be placed in non-fruiting trees, and this can be an effective way to

keep the flies away from your precious fruit too!

Exclusion bags and netting

Exclusion bags are available in a wide range of types and sizes locally from Guildford Town Garden Centre (9279 8645), and also online from www.greenharvest.com.au Completely organic, they prevent the adult fruitfly from getting to the fruit to lay her eggs - if used at the right time (again, you may find traps helpful as an indicator). Exclusion bags also prevent



sunburn of fruit, and are re-useable.

Netting trees with insect netting or by using old net curtains is also effective, providing you can cover the tree to ground level. This method has the added benefit of keeping birds away from fruit, but is only practical where you have a small to medium tree that you can easily cover.

Find insect netting online at www.commercialnetmakers.com.au

The other way to use netting, or soft flywire, is to simply cover selected branches - think Christmas bon bons! Ensure you join all edges together well - you only need a tiny gap to allow the flies access.

Good housekeeping

Simple, cheap - but why is it common to see fallen fruit left to rot at the base of a tree? This soft fruit is easily available for adults to lay eggs, and will allow numbers to explode. When picking up fruit that has been struck with Medfly, don't bury it or put it straight into the compost. The eggs and larvae can survive. Freezing, cooking or pureeing the fruit will destroy the Medfly (and the fruit can then be fed to chooks). Soaking in water too will work, however the larvae can survive for weeks. It is recommended to add a thin layer of kerosene to the water, to seal the water and prevent the oxygen exchange.

Alternatively put the fruit into a plastic bag (with no holes), tying it up securely, and leave it in the sun for a couple of weeks. The fruit will continue to break down, but it will also reach high temperatures which kill off the larvae. Check, and if no signs of life, the fruit can then be composted or disposed of. We have been shocked to find larvae still alive after eight weeks.

Finally, select varieties of fruit which are less susceptible to fruit fly - either through type of actual fruit or by when in the season it ripens. Often, early ripening varieties are less affected simply because Medfly numbers tend to build up as summer goes on. Alternatively if you move to a property that has a fruit tree

you don't want, either arrange to give the fruit away or have someone harvest it for you (there are often people who will be happy to exchange a load of fruit for a supply of jam!); or perhaps remove the tree and replace it with something else (preferably also green and alive). That way you won't be contributing to fruit fly numbers in your area and you won't have the worry anymore.

Using a combination of these methods will certainly help keep numbers of Medfly down, and you should be able to enjoy your own home grown fruit! Encourage your neighbours to do the right thing and control numbers too; otherwise all your hard work can be to no avail if your yard is continually being populated from over the fence! If they aren't keen gardeners, why not offer to make and check baits in their trees too - whilst being neighbourly it can also make a huge difference to your own harvest size!

Freezing, cooking or pureeing the fruit will destroy the Medfly and the fruit can then be fed to chooks.

Towards a National Food Plan for Australia Response from PermacultureWest

The Australian Government is developing Australia's first ever national food plan to help ensure that the Government's policy settings are right for Australia over the short, medium and long-term.

Unfortunately the green paper is focused on expanding export markets, and continuing the big business, environmentally exploitative, and rural life destroying practice that it currently uses. PermacultureWest has made a submission to hopefully add some reality and rational thinking to the policy. In a

time when other countries are shoring up food security and supplies to just feed their populations, the Australian Government is thinking about exporting all our water, fertility and food. I don't think they realise Australia is one of the driest, most infertile countries in the world, and we will struggle to just feed our own in a drying climate and increasing population.

Our submission was sent in late September and should soon be posted on www.daff.gov.au/nationalfoodplan

Letters from Lesotho #2

By Miles Durand

There have been two significant snow falls in June and July in the Lesotho mountains ranges. In June, me and three other AVI volunteers drove up to the snow ski fields of northern Lesotho. It was a most spectacular drive through a 2,850m pass, frozen waterfalls and snow covered mountains. The snow fields resort had a very wealthy European feel, mainly South African car number plates. Only two car number plates were from Lesotho.

My morning walk down the mountain track to Phelisanong now has the snow covered Maloti mountains in the foreground. The landscape is very brown and dry with some paddocks having been ploughed ready for spring crop sowing. The deciduous trees, willows, poplar and peach trees are still bare of leaves. The garden bed that we constructed in the autumn has a crop of peas. And the compost heap is heating up with its turning planned in two weeks. The site works for the planned plant nursery / garden centre are almost complete with fencing, green house and shade house to be constructed in August. The pruning of the peach trees combined with a training component will be completed late June / August. In the two new fenced orchards, 850 apple and peach trees are being planted. The total number of fruit trees in three orchards will be 3,850.

I am receiving some news from the home paddock and very pleased to see that Foxcliffe Farm Ecovillage has been included in the Witchcliffe development strategy. I wish to thank the AMRSC councillors that have supported this example of sustainable development. In the fullness of time, this positive action will be seen as a milestone event in the AMRSs journey of transition, from being dependent on fossil fuels to a new, solar age. The concept of a village within a farm is very real in rural Lesotho. The farm land around the village is the origin of its fuel, food and water. All organic

waste from the village goes to the surrounding farm land and the labour of the village works the farmland. In a post peak oil world, food, water and energy will come from the surrounds of the human habitation. Examples of this in the less developed world such as Lesotho could be a model for communities in the over-developed, oil-dependent world.

I am planning my move to Foxcliffe Farm Ecovillage in 2014 and designing a small energy use eco-footprint house and flower, fruit and vegetable garden. I'm looking forward to becoming very active in its many organic production activities including its orchards, vineyard and community governance. In these uncertain and troubled times living in an ecovillage such as Foxcliffe Farm will be a matter of survival. They will become islands of light in seas of darkness. Supporters and future residents of Foxcliffe Farm Ecovillage should keep their faith strong in the vision of a sustainable future for themselves, their family and community.

Acknowledgement to J. Lennon, "Imagine".

You will say that I am a dreamer; I say that I am not only the one. McMansions are but lemons, join the eco-team with the sustainable runs.

A follow-up on "Food from Sand - In-ground clay-lined Hugelkultur wicking bed Trials"

By Charles Otway



Beds in late July

The test has gone very well so far. The plants are healthy, and vigorous, even with the windy, stormy weather on the exposed street. The main highlight has been lots of neighborhood inspiration is happening.

These beds have been watered three times in three months but will require more in summer.

The pictures tell the real story. Food producing... worth doing! Get out to your verge!

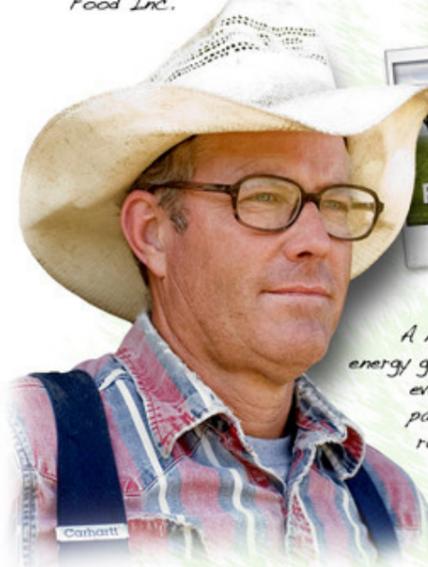


Beds in October

Remember you can purchase discounted tickets to Joel Salatin at www.hdworldevents.org/products/candlelight-farm-alumni-ticket

THE WORLD' BEST FARMER 1st TIME TO WESTERN AUSTRALIA

Meet the world's most recognised 'beyond organic' & strictly local, clean food farmer, prolific author & inspiring speaker. The ethical farmer featured in the recently released, critically acclaimed, Academy Award nominated documentary Food Inc.



A masterful speaker whose humour and positive energy guarantees inspiration, action and activism. This event will cover his entire family farm operation; pastured poultry, salad bar beef, pigraerator pork, rabbits & forestry products to the relationship marketing approach his family has mastered that makes Polyface Farm the internationally recognised, but strictly local and very successful farm it is today... DON'T MISS...

JOEL SALATIN

Monday 22nd October 2012

Serpentine Jarrahdale Community Centre

Byford, Western Australia, AU - 9am - 5.30pm

\$180/pp Singles, \$140pp Family Friendly*, Kids Under 16 free

Includes Lunch/Teas, Fantastic Door Prizes, Displays & Tastings!



Bookings Essential !!

*www.HDWorldEvents.org

Phone 0431 444 836

BioFertile Farms workshops

The first WA three day BioFertile Farms workshop was held at Mountfords Winery in Pemberton in May. It was developed by RegenAg and featured South American biofertiliser expert, Eugenio Gras, who provided theoretical and practical knowledge and skills to enable participating land managers to manufacture biofertilisers, solubilise mineral preparations, harvest and breed native microbes for use in fermenting fertilisers, inoculating seeds and to ameliorate the soil, and a fast-track compost incorporating solubilised minerals.

The course also provided instruction in the processes of preparing low cost chromatographs of soil samples and interpreting the results – principally to identify compaction, the presence of minerals, microbes and organic matter and the degree to which the microbes have integrated the discrete elements, thus providing farmers with a snapshot of their soil's health.

Wrap up

For several years RegenAg has been conducting a series of courses in Queensland covering regenerative agriculture topics: holistic farming, pasture cropping, keyline ploughing and water harvesting, polyface systems as well as chromatography and biofertiliser manufacture. Warren Catchments Council has been negotiating with RegenAg for an extended period to bring the courses to WA.

Since the course, group members have been busy mixing brews, breeding native microbes, making compost, practising chromatography and keeping WA and Queensland participants updated on their activities in the Google Groups forum.

What people said

Will initially be concentrating on generating as much bone ash as I can from local bones that I have access to, producing Native Microbial Bio Fert, as

well as creating a Chromo baseline for my property. Later on I will give fosphito a go. Enjoyed the course and got a lot out of it.

I am currently waiting for some chroma supplies to arrive and then I will be testing our orchard and our compost. Am intending to start a NMSeed mix by the end of the week to get that process under way.

I am keen to start brewing asap. I would be keen to attend more information days on a local level- anything to do with soil microbiology and chromatography would be fantastic

It was so amazing what he was teaching: It was like modern science, mixed with ancient knowledge



BIOFERTILE FARMS

Eugenio Gras returns to WA for this very popular three-day workshop.

Learn how biofertilisers can drastically increase your on-farm fertility, saving you thousands of dollars a year on inputs. The workshop also covers Chromatography, an invaluable technique that shows the relationship between minerals, organic matter & microbes in soils.

An essential package of information, easily within the scope of the average land owner.

YANMAH

12th - 14th October, 2012

9am - 5pm

www.RegenAG.com