

Care for the Earth

Care for People

Share the Surplus

Sustainable Farming

Biodynamics

Ecological Farming

Organics

Regeneration Farming,

Permaculture

Agroecology

January

2023

HAPPY

Dirty Diggins

NEW YEAR

January in the garden

What to Sow:

Brussels sprouts (seedling tray), beans (bush), beetroot, carrot, cucumber, lettuce, kohlrabi, mustards, parsnip, parsley, radish, silverbeet, turnips.

What to do:

For many, January means holidays, so make sure you have a plan for watering over this period. Look to install a form of an irrigation system with a timer, or better still, ask a friendly neighbor to water your plants in exchange for some produce. Look to mulch the garden beds with a straw-based mulch, to try and retain moisture in the soil. Provide sun protection on sweltering days using shade cloth on crops such as tomatoes, so not to burn the fruit.

January Plantings

Amaranth, Beans (dwarf/ climb), Beetroot, Brussels Sprouts, Cabbage, Carrots, Cauliflower, Celery, Chicory, Cress, Cucumber, Endive, Leeks, Lettuce, Pumpkin, Radish, Rhubarb Seed, Salsify, Silverbeet Spring Onions, Sunflower, Sweetcorn, Zucchini

Magazine of Picket Fence Urban Farm
1167 South Road St Marys
Ph: 0434 354 539

In this issue

Biosphere and Technosphere

Fossil fuel emissions still

What is Regenerative Agriculture and Agroecology?

What is Permaculture?

Sweet Corn

How to Grow Anise *Pimpinella* Plants

Dirty Talk Clean Planet

Fertilisers and pesticides 'confuse bees'

Living fences Using plants to define your boundaries

Faced with a planetary emergency, is deep ecological transformation, a 'megamorphosis' of modern society, still a possibility?

"Modern man does not experience himself as a part of Nature but as an outside force destined to dominate and conquer it. He even talks of a battle with Nature, forgetting that, if he won the battle, he would find himself on the losing side." – E.F. Schumacher, *Small Is Beautiful*

We need bold solutions to an existential problem: humans have become an immensely powerful planetary force, and after millennia of modest Nature-focused ways of living, humanity has morphed into an urban-industrial giant seeking to unshackle from Nature's embrace. But our remorseless interventions in the world's ecosystems are threatening our own future existence. Can we still change course?



The ever-growing global environment movement is doing its best to try and stem damage to forests, soils and oceans, and yet the destruction continues. Why is this?

This essay proposes that we are faced with a profound problem of perception. Our education system has yet to convey a clear understanding of the special properties of life: we are barely addressing the systemic clash between modern humans and Nature, between technosphere and biosphere: the deep-seated ecological problems we face need to be vigorously addressed in the content of our education and communication systems.

We need to ensure that young people, whose very future is at stake, are equipped with the know-how to address these vital issues. Much of our education system is focused on providing students with narrow perspectives, supposedly enabling them to get a stake in a prosperous future for themselves. More than ever before they need clear perspectives on how we can live in unison with life on Earth. Faced with a planetary emergency, is deep ecological transformation, a 'megamorphosis' of modern society, still a possibility? What can education contribute?

The biosphere

All life, including human life, ultimately depends on the wellbeing of our host planet as a vast, interconnected, synergistic system. The great naturalist Alexander von Humboldt, drawing on his extensive travels and inspired by German philosopher Friedrich Wilhelm Joseph Schelling's *Naturphilosophie*, called the Earth a "wonderful web of organic life". In his internationally best-selling *Kosmos* series of books, he was a pioneer of an ecological worldview: "Nature is a living whole, not a dead aggregate," he wrote in 1845.

Education at all levels – schools, universities and further education – needs to focus on these existential challenges and to assure that biosphere and technosphere are aligned.

It was the famed Austrian geologist Eduard Suess who named the space on Earth that contains life, including human life, the biosphere. In 1875 he wrote: "The plant, whose deep roots plunge into the soil to feed, and which at the same time rises into the air to breathe, is a good illustration of organic life, interacting between the upper sphere and the lithosphere. On the surface of continents, it is possible to single out an independent biosphere."

This concept was revisited in 1926 by Russian Ukrainian biochemist Vladimir Vernadsky when he published his book *The Biosphere*, focused on the interaction between planetary biology, chemistry and geology. He says: "The biosphere is the only region of the Earth's crust where life is to be found... Without life, the face of the Earth would become as motionless and inert as the face of the moon." The term 'biosphere' is now familiar as the place where photosynthesis, powered by the sun's energy, reigns supreme.

The biosphere is a profoundly dynamic place, with a vast variety of living organisms interacting with one another. Most traditional cultures and some modern thinkers have recognised a vital force being present in Nature, but this very notion is being refuted by much of contemporary science. In 1988, the evolutionary biologist Ernst Mayr wrote: "Vitalism has become so disreputable a belief in the last fifty years that no biologist alive today would want to be classified as a vitalist."

Perhaps the word 'vitality' might be a less contentious term to describe the dynamic forces present in Nature. Unlike non-living things, living organisms have the capacity to reproduce and to grow. They are made up of cells that divide

and develop into distinct organisms, seeking out organic matter as food. They interact and communicate with one another, and adapt to the world around them.

Vitality, of course, is also closely twinned with mortality, as all living organisms die sooner or later, but crucially death is also the basis of new growth and new life. Nature, in its vast variety and abundance, is an essentially circular system, with continuity of life a key, systemic feature.

In 1979, James Lovelock, in his book *Gaia: A New Look at Life on Earth*, had his own take on this perspective, boldly arguing that “life (itself) maintained the stability of the natural environment, and that this stability enabled life to continue to exist.” His work stimulated the emergence of Earth systems science, focused on both the interlocking cycles of Nature and the human interactions with it, but this new, multidisciplinary way of viewing our home planet hardly features in our education curricula.

Gaia theory has given rise to a new ‘Earth consciousness’, at a time when the relationship between humans and our home planet is becoming ever more precarious. Lovelock was deeply concerned that humanity, whilst being part of the Gaian system, was nevertheless a profoundly destabilising force vis-à-vis life on Earth, particularly regarding our reckless use of fossil fuels. He pointed to the ever-rising CO₂ concentrations in the Earth’s atmosphere, increasing from 290ppm to 420ppm during his lifetime. He saw it as crucially important for Earth consciousness to become deeply embedded in education to help us develop a holistic relationship between people and planet.

Changes in biomass

Earth consciousness is of critical importance at a time when human impacts on the biosphere have reached unprecedented proportions. A study recently published by Ron Milo of the Weizmann Institute in Israel investigates the impacts of modern humanity on the biosphere and the astonishing changes that have occurred. He found that human activities have reduced the biomass of wild marine and terrestrial mammals by more than 80 per cent, and the biomass of plant matter by 50 per cent. Farmed poultry today makes up 70 per cent of all birds on the planet, and just 30 per cent of birds are wild. Farmed animals, mostly cattle and pigs, comprise 60 per cent of all mammals on Earth, 36 per cent of mammals are human, and just four per cent are wild. Today eight billion people equipped with a vast array of new extractive technologies outstrips the Earth’s annual renewable resources budget. “I would hope this gives people a perspective on the very dominant role that humanity now plays on Earth,” Milo told [The Guardian](#).

Faced with a climate and biodiversity emergency, it has never been more important for all of us to develop a comprehensive understanding of the vast web of life, using Earth consciousness, or what Fritjof Capra calls ‘eco-literacy’, as our frame of reference. Capra emphasises that we need to refocus from biology and the study of single organisms to the wider realm of ecology and the complexity of species interaction.

This also requires us to get a clear view of the difference between living systems and inanimate matter. According to quantum physicist Erwin Schrödinger, “Life seems to be orderly and lawful behaviour of matter, not based exclusively on its tendency to go over from order to disorder, but based partly on existing order that is kept up... We must be prepared to find a new type of physical law prevailing in it... From all we have learnt about the structure of living matter, we must be prepared to find it working in a manner that cannot be reduced to the ordinary laws of physics.”

This view was shared by Ludwig von Bertalanffy, the inventor of general system theory. He proposed that the classical [laws of thermodynamics](#) might be appropriate to closed systems, but not necessarily to open systems such as living things: “The conventional formulations of physics are, in principle, inapplicable to the living organism being open systems having a steady state. We may well suspect that many characteristics of living systems which are paradoxical in view of the laws of physics are a consequence of this fact.”

Rainforest ecosystems demonstrate these properties of life most vividly. Their canopies, directly exposed to sunlight, are harbingers of Earthly abundance. As their leaves, fruits and nuts fall to the ground, they also enrich life on the forest floor, of low-growing vegetation, and of fungi and invertebrates.

Importantly, all the multiple leaf layers of a forest add up to a surface area many times larger than the soil surface on which the forest stands, a fact that is barely reported. With deforestation, a landscape’s bioactive surface is greatly reduced, and photosynthesis, and thus the production of oxygen, is invariably compromised. Similarly, in the oceans, loss of seagrass meadows, kelp and mangrove forests compromises the health of the biosphere.

Nature’s reproductive systems are extremely good at reprocessing the materials they are made of, and this capacity has enabled them to persist on Earth for billions of years. Since all its waste products become sources of new growth, every output by an organism is also an input that renews the living environment, assuring the continuity of life.

The circular, solar-powered reproduction processes found in Nature are systemically different from the linear industrial production processes, mostly powered by fossil fuels, that characterise technical systems. Can we reorganise our technical systems to try and mimic Nature’s living systems?

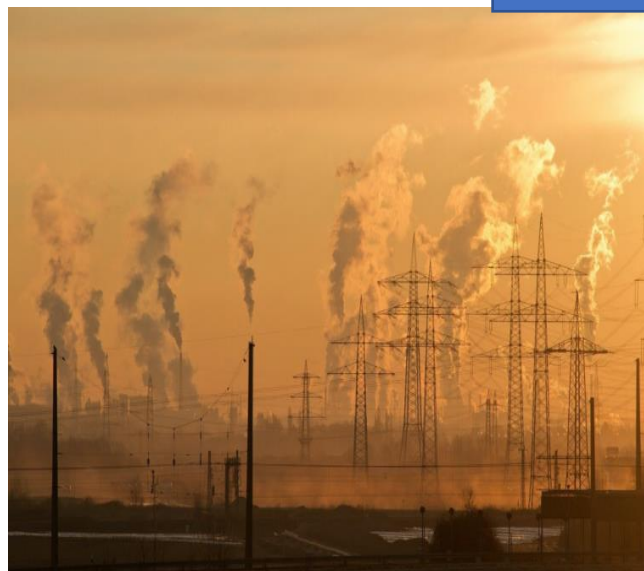
[Biosphere and technosphere \(theecologist.org\)](http://theecologist.org)

'This year we see yet another rise in global fossil CO₂ emissions, when we need a rapid decline.'

Global carbon emissions in 2022 remain at record levels – with no sign of the decrease that is urgently needed to limit warming to 1.5°C, according to the Global Carbon Project science team.

If current emissions levels persist, there is now a 50% chance that global warming of 1.5°C will be exceeded in nine years.

The new report projects total global CO₂ emissions of 40.6 billion tonnes (GtCO₂) in 2022. This is fuelled by fossil CO₂ emissions which are projected to rise 1.0% compared to 2021, reaching 36.6 GtCO₂ – slightly above the 2019 pre-COVID-19 levels. Emissions from land-use change, such as deforestation, are projected to be 3.9 GtCO₂ in 2022.



Atmospheric

Projected emissions from coal and oil are above their 2021 levels, with oil being the largest contributor to total emissions growth. The growth in oil emissions can be largely explained by the delayed rebound of international aviation following COVID-19 pandemic restrictions.

The 2022 picture among major emitters is mixed: emissions are projected to fall in China (0.9%) and the EU (0.8%), and increase in the USA (1.5%) and India (6%), with a 1.7% rise in the rest of the world combined.

The remaining carbon budget for a 50% likelihood to limit global warming to 1.5°C has reduced to 380 GtCO₂ (exceeded after nine years if emissions remain at 2022 levels) and 1230 GtCO₂ to limit to 2°C (30 years at 2022 emissions levels).

To reach zero CO₂ emissions by 2050 would now require a decrease of about 1.4 GtCO₂ each year, comparable to the observed fall in 2020 emissions resulting from COVID-19 lockdowns, highlighting the scale of the action required.

Land and ocean, which absorb and store carbon, continue to take up around half of the CO₂ emissions. The ocean and land CO₂ sinks are still increasing in response to the atmospheric CO₂ increase, although climate change reduced this growth by an estimated 4% (ocean sink) and 17% (land sink) over the 2012-2021 decade.

Meaningful

This year's carbon budget shows that the long-term rate of increasing fossil emissions has slowed. The average rise peaked at +3% per year during the 2000s, while growth in the last decade has been about +0.5% per year.

The research team – including the University of Exeter, the University of East Anglia (UEA), CICERO and Ludwig-Maximilian-University Munich – welcomed this slow-down, but said it was "far from the emissions decrease we need".

The findings come as world leaders meet at COP27 in Egypt to discuss the climate crisis.

"This year we see yet another rise in global fossil CO₂ emissions, when we need a rapid decline," said [Professor Pierre Friedlingstein](#), of Exeter's [Global Systems Institute](#), who led the study.

We must not allow world events to distract us from the urgent and sustained need to cut our emissions.

"There are some positive signs, but leaders meeting at COP27 will have to take meaningful action if we are to have any chance of limiting global warming close to 1.5°C. The Global Carbon Budget numbers monitor the progress on climate action and right now we are not seeing the action required."

Emissions

[Professor Corinne Le Quéré](#), Royal Society Research Professor at UEA's [School of Environmental Sciences](#), said: "Our findings reveal turbulence in emissions patterns this year resulting from the pandemic and global energy crises.

"If governments respond by turbo charging clean energy investments and planting, not cutting, trees, global emissions could rapidly start to fall.

"We are at a turning point and must not allow world events to distract us from the urgent and sustained need to cut our emissions to stabilise the global climate and reduce cascading risks."

Land-use changes, especially deforestation, are a significant source of CO₂ emissions (about a tenth of the amount from fossil emissions). Indonesia, Brazil and the Democratic Republic of the Congo contribute 58% of global land-use change emissions.

WISHING YOU A HAPPY, SAFE AND ABUNDANT NEW YEAR

Transparent

Carbon removal via reforestation or new forests counterbalances half of the deforestation emissions, and the researchers say that stopping deforestation and increasing efforts to restore and expand forests constitutes a large opportunity to reduce emissions and increase removals in forests.

The Global Carbon Budget report projects that atmospheric CO₂ concentrations will reach an average of 417.2 parts per million in 2022, more than 50% above pre-industrial levels.

The projection of 40.6 GtCO₂ total emissions in 2022 is close to the 40.9 GtCO₂ in 2019, which is the highest annual total ever.

The Global Carbon Budget report, produced by an international team of more than 100 scientists, examines both carbon sources and sinks. It provides an annual, peer-reviewed update, building on established methodologies in a fully transparent manner.

[Fossil fuel emissions still increasing \(theecologist.org\)](https://theecologist.org)

WHAT IS REGENERATIVE AGRICULTURE AND AGROECOLOGY?

Regenerative agriculture and agroecological farming protect soil life while ensuring plants, animals, humans, wildlife, and the environment can thrive within an agricultural system.

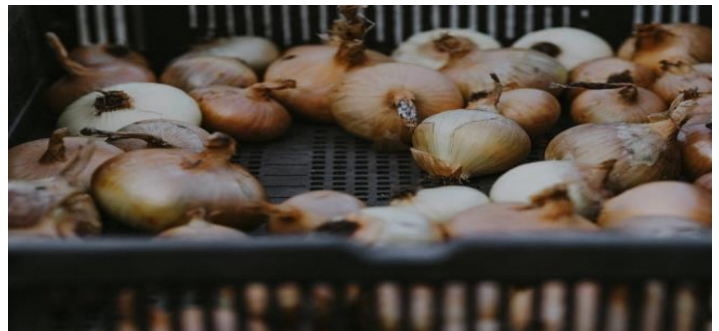
To understand why regeneration is so important, we first have to understand the problems with our food systems, summed by two important facts.

First, **carbon is not our enemy**. There are **the same quantity of CO₂ atoms** on this earth, that there were at the beginning of time. They're just **stored in the wrong places**. Which is what causes global warming and climate breakdown to proliferate.

Second, all thriving is mutual. In just one teaspoon of healthy soil there are more lifeforms than humans on this earth. These living beings who dwell within our soil, support all life on this planet. And their health and vitality directly relates to our health and vitality.

WHAT IS REGENERATIVE AGRICULTURE AND AGROECOLOGY? *continued*

*There are more
living beings in
one teaspoon of healthy soil
than there are
people on the planet
– Finian Makepeace*



How Does Food Production Contribute To Global Warming?

Industrialised agriculture is fed by fossil fuels. When we burn fossil fuels, we are displacing carbon dioxide from its home in the soil, where its presence *creates* life. And forcing its migration into the atmosphere and oceans, where its overpopulation *takes* life.

Unfortunately, the harms of the farming industry don't end with carbon displacement. Through the use of agrochemicals, the way we grow our food and fibres poisons the air, soil and waterways. Negatively affecting the health of all living beings (*humans, plants, animals, ocean life, soil life and wildlife*) and putting lives – and our own – at risk.



In addition to the agrochemicals and fossil fuel abuse, the way we farm breaks up the soil's structure as well. By tilling and ploughing the soil, we release *more* carbon dioxide from its safe home in the soil by destroying the soil aggregates (*which give the soil structure*). Soil aggregates are essentially a housing complex for those millions of lifeforms who dwell below ground, in the same way a coral reef is home to small sea life. Without their home, soil life, and the soil itself, dies. Which means we cannot grow food and nature cannot thrive.

There are many more ways industrialised agriculture's methods contribute to **global warming and ocean acidification**. Including monocrops, GM, **overgrazing**, misplaced slurry, over-farming, and so on.

So, what is the solution to this messy system of supremacy? The answer lies in a set of practices and principles known as Agroecology or Regenerative Agriculture.

What Are The Advantages Of Agroecological Farming and Regenerative Agriculture?

Agroecological farming or regenerative agriculture protects this soil life while ensuring plants, animals, humans, wildlife, and the environment can thrive within an agricultural system.

Regeneration also [reverses the effects of climate breakdown and global heating by keeping carbon out of our atmospheres and oceans, and inside the soil instead.](#)

Because each ecosystem and soil type is unique, there is no single method to Agroecology that works everywhere. Instead, it is an umbrella term for many diverse practices which regenerate our biosphere. Each principal offered, is a gift passed down from surviving Traditional and [Indigenous Ecological Knowledge, gathered and shared by the true stewards of the earth.](#)

Some of the main principles of Agroecology and Regenerative Agriculture include:

- planting diverse cover crops and perennials
- holistically mob grazing native animals
- planting tree crops alongside food crops (*agroforestry*)
- crop rotations (*which eliminate monocultures*)
- banning pesticides, herbicides, fungicides + synthetic fertilisers.

The amazing thing about Agroecology is that its principles can be practised in spaces as small as a plant pot, or as big as a farm, offering food sovereignty for all.

[What Is Regenerative Agriculture and Agroecology? - HOLLYROSE.ECO](#)

WHAT IS PERMACULTURE?

Permaculture

Permaculture is a design method for creating regenerative human settlement systems based in natural patterns and processes.



THE THREE ETHICS:

Care for the earth, care for people, and fair share. They form the foundation for permaculture design and are also found in most traditional societies.



Care for the Earth



Care for People

Picket Fence Urban Farm 1167 South Road St Marys

Coordinator: Rob Collett E: rcollettperma@lookout.com Ph: 0434 354 539



Fair Share

COMMON SENSE PRINCIPLES OF PERMACULTURE: (As described by Starhawk):

"The beauty of the permaculture way of seeing the world is that you will begin to see many more principles of regenerative systems not just limited to these 13"

- **Everything is connected** – Abundance, health and happiness come not from things, but relationships. Money can't buy me love! As designers, we look at connections in space and time. If we put things in the right place, do things in the right order and at the right time, we save work, money and energy.
- "To everything, there is a season, and a time for every purpose under heaven." We look at flows between things—flows of water, energy, nutrients, information. Every time we link things together, we create more abundance than when they are separated.
- **Nature moves in circles** – Birth, growth, death and regeneration—everything in nature is part of a cycle.
- **Waste is food** – one thing's waste is another things' resource. So—produce no waste, re-use, recycle, and look for places where we can close loops—find a use for a former waste product. Pollution is an unused resource. To maintain the cycle, we must give back. If we use a resource, we must replenish it.
- **Energy is abundant but not unlimited** – Every day the sun shines down on the earth, showering us with energy. The sun's energy gives us our solar budget—that extra that creates growth and abundance. But we must use it wisely. So—catch and store energy. Cycle energy and resources multiple times. Use renewable energy.
- **Do more with less** – Make the best use of nature's abundance to reduce our consumptive behaviour and dependence on non-renewable resources. "Let nature take its course"
- **Produce No Waste** – Make a way out of no way. Grow two flowers with one seed. Every element serves more than one function—so choose and place it carefully. A climbing rose, in the right place, might produce a bouquet, filter the wind, and keep out intruders.

Use on-site and local resources whenever possible.

- **Let nature do the work** – if you can use a biological resource, chances are it will be cheaper, easier and more effective than chemical or mechanical means.
- **If it aint broke don't fix it** – Work smarter, not harder! Use your eyes and your brains more, and your money, your muscles and your fossil fuels less. Look before you leap. Observing, thinking, designing and planning can save you time, sweat and money. Resilience is true security.
- **Use and Value Diversity** – For diversity creates resilience. This is true for ecosystems, gardens and humans! Give your plants the right companions in guilds, polycultures and crop rotations. Edges and margins, where two things meet, are often more dynamic and creative than either one alone, so make use of them.
- **Have more than one way to fill a need** – Don't put all your eggs in one basket. Have more than one source for food, energy, income, etc. Make mistakes— carefully! Start slow and small so you can try new things and tweak what doesn't work.
Weak links and constraints – design for the limiting factors. Design for catastrophe—the hundred year flood could come tomorrow! Small-scale, intensive systems are more diverse, creative and resilient than giant megasystems.
- **Build from the ground up** – First things first. Prepare the soil before you plant the seeds. Respect the roots of culture, place, and people as well as plants.
- **In nature, there's a succession of evolution** – pioneer plants prepare the ground, grasses move in, then trees...work with those patterns to speed them up or hold them back.
- **Take responsibility** – Feed what you want to grow. Create the conditions that will favour the things or behaviors you want, rather than making war on what you don't want. Trying to kill the pests simply breeds resistance. You break it—you bought it. If you change something, you become responsible for the consequences.

- **Monitor and maintain what you create** – Permaculture systems rarely work perfectly at first; they are living things that need adjustment.
- **Get some! Obtain a yield** – You've got to get back for what you put in. You have a right to a life of health, abundance, joy and beauty—and that's why we're doing this. Grow what you want to eat. Decide what yield you want, and plan for it.
- **Get the biggest bang for the buck** – observation, creativity and planning will let you use the least amount of time, money and energy to get the benefits you desire. Don't use a chainsaw to cut your cheese. The gift multiplies. Nature is generous—when we give freely, we create more abundance for everyone.
- **Creativity is an unlimited resource** – Nurture creativity in nature and in people, and you will reap rich rewards. Focus on solutions rather than just complaining about problems. The problem is the solution. Look for ways to add creativity and you will add value.

[What Is Permaculture? — Black Permaculture Network](#)

Veggie Patch

Sweet Corn BY HELEN TUTON

Zea mays

Is there anything sweeter than home grown corn? Corn on the cob, done on the barbie is a stunner, and adds some real height and interest to your Yummy Yard. Kids love corn, and I have seen some really creative gardeners make a "Maize Maze" and "Corn Corners" in their backyards, adding some magic kids spots to the patch.

Shop bought corn often leaves a lot to be desired. Corny jokes aside, growing your own sweet corn and saving the seed is a super sustainable species saver. So lets plant corn (Jack)!

Planting Schedule

Warm Areas: September – October, but in tropical areas almost any time except December

Temperate Areas: September – October, although you may still succeed up to January

Cool to Cold Areas: End of October – November

Position, Position, Position!

Now, it really is all about position, position, position with these sweeties! They need full sun, no exceptions, and must have protection from strong winds (no-one likes a floppy corn!). Sweet corn are a friendly mob, and will do best when planted in a block style formation. This encourages better cross-pollination, which means more corn for you! The more corn you can fit in the better, and remember to allow about 40 – 50cm between plants.

Don't fret about losing all your space, sweet corn are quite happy to be under planted once they grow up a bit. Try climbing beans or cucumbers... they are excellent companions, suppress weeds and you will seriously increase your **productivity in your Yummy Yard.**

Talking Dirty

The first thing that needs to be done when thinking about planting sweet corn is soil improvement! Loads of organic matter (you know, the good stuff like compost and aged manure), or try planting sweet corn after a green manure crop. Sweet corn will tolerate most deep, lush soils, but they hate clay! Oh, and, as with all Yummy Yards, mulch well with pea straw or similar after planting.

Feed Me!

Feeding sweet corn that has been planted into good, rich soil is not a huge issue. A wee drink of manure tea after establishment, and then an additional wee drink when you see the flowers should do the trick!

Sweet corn is dead easy to look after, but there are a couple of things you can do to ramp up productivity. One of my tried and trues with sweet corn is to pile up compost around the base of the stem. Called "hilling", making mounds of compost about 15 – 20cm high will increase the amount and flavour of your sweet corn, and will keep the big buggers upright!

What about the Water?

Sweet corn, like me on the weekends, loves a good drink, and this can be an issue where water is scarce (like the whole of our wide brown land!!!). High amounts of organic matter and mulch in the patch will reduce the need for the precious wet stuff, but the key is not to let them dry out. Why not dedicate Monday, Wednesday and Fridays shower warm up water to the corn (only when required of course)? They'll thank you for it, and you'll get super buff carrying that bucket. As always, greywater is a no go!

Are We There Yet?



I get asked all the time by folks that grow corn, how they can tell when it's ready. Two to three weeks after flowering, sweet corn is generally ready to be harvested. You'll know when it's flowering because the bloke flowers look like wheat. Sweet corn is good to go when the little tassely bits at the top of the cob are brown and shrivelled, the husks are no longer glossy and the corn kernels ooze a milky sap when you jab it with your fingernail. Oh, and you have a pretty small window of time in which to harvest corn, so when you reckon they are good to go, get harvesting and then get eating!

Pests and the Rest

Corn does have a couple of pests, dependent on where you live. Bushrats have always been my personal bugbear, but nothing a bit of vine netting didn't put an end to. The biggest issue with sweet corn is the aptly named "earworm", who, not surprisingly, nests in the ears of corn. A nice diverse patch, healthy soil and good watering regime should prevent attack, especially if you whack some carrots and daisy type plants into your patch. Bad infestations could be dealt with using derris dust or *Bacillus thuringiensis* (despite the scary name, this is a readily available low environmental impact worm destroyer!), but I reckon removing the worms and feeding them to the chooks is a top idea!



Hot Tip

Corn, once harvested, goes downhill pretty quickly and rapidly loses flavour. The best way to enjoy sweet corn is really fresh. But, if required, blanching corn and then freezing it is a top thing to do. My other hot tip – don't put salt in the cooking water (yes Mum, I'm talking to you!). It converts the sweet corn sugars (yum) into starch (not so yum), so wait 'til you're about to eat it to salt it!

Eat Me

Sweet Corn loves to be baked in the oven or barbequed. Keep them in their husky tuxedos or wrap them in foil. Try smothering them in these flavoured butters before and after cooking:

Coriander Pesto (see the [Coriander](#) page)

Soy and Shallot (100g butter, 1 tsp soy sauce, 1 finely sliced shallot)

Chili and Ginger (100g butter, 1 chili, 2cm knob of ginger, 1 tsp ground coriander)

Lemon and garlic (100g butter, 1 tbsp lemon juice, handful parsley, 1 garlic clove)

Why not bake or BBQ a cob of corn, slice off the kernels and add it a salad with cous cous, quinoa or rice?

[Growing Sweet Corn | Sustainable Gardening Australia \(sgaonline.org.au\)](http://sgaonline.org.au)

How to Grow Anise *Pimpinella* Plants

Herb Spiral

The *Pimpinella* plant genus consists hardy annual herbs that reach from 45 to 90 cm (18 to 36 inches) in height.

Some common names for *Pimpinella* include Aniseed and Anise.

Latin names include *Pimpinella anisum*, *Pimpinella major rosea*, *Pimpinella saxifraga*.

Aniseed blooms in the summer with umbels of tiny white flowers and plants are converted for their seeds; these should be harvested once they begin to turn grey and loosen easily from their coats.



Pimpinella Plant Growing and Care Guide

Common Names: Anise, Anis, Aniseed, Burnet saxifrage.

Life Cycle: Hardy annual.

Height: 20 to 36 inches (50 to 90 cm).

Native: Mediterranean, Europe, Western Asia.

Flowers: Summer.

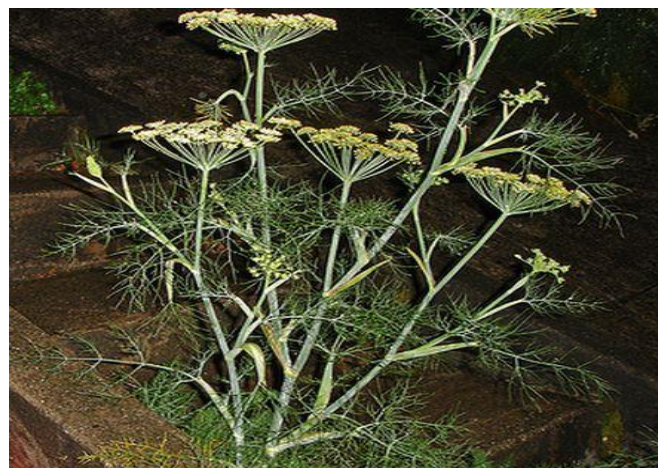
Flower Details: White, pink. Umbels.

Foliage: Pinnate/feather-like. Simple, lobed (at the base).

Sow Outside: 1/4 inch (6 mm). Following the last frost.

Spacing 4 to 10 inches (10 to 25 cm).

Sow Inside: Use peat pots. Germination time: three to four weeks. Temperature 70°F (21°C). Nine or ten weeks before expected last frost. Transplant outdoors following the last frost.



Requirements: Full sunlight. Good drainage. Soil pH 5.5 to 6.5. Average soil. Moist soil. Provide support. Regular watering during prolonged dry periods. Harvest when seeds turn grey.

Family: Apiaceae.

Miscellaneous: Anise has a liquorice taste. Anise fruit is known as aniseed. Burnet Saxifrage is used in traditional German green sauce (Grüne Soße) along with Borage, Chervil, Dill, Chives, Cress, Sorrel and Parsley.

How to Grow Aniseed and other Pimpinella Plants in the Garden

The seeds of Aniseed should be sown at a depth of 6 mm (1/4 inch) following the last frost of spring.

Pimpinella Plants prefer an ordinary soil that is slightly acidic, about pH 5.5 to 6.5. The soil should have good drainage.

It is best to grow Aniseed herbs in a sunny area of the garden, and to space them at about 15 cm (6 inches) apart. This will allow the aniseed plants to support each other, and make the harvesting of aniseeds less hassle.

If starting off Aniseed indoors, then grow them about two months in advance.

The seeds should take about four weeks to germinate at around 20 degrees centigrade (68°F). Once ready, transplant the Aniseed outdoors in mid-spring, when there is no chance of a frost.



Caring for Aniseed - Pimpinella Plant

Aniseed and other Pimpinella plants have gangly growth so keep them close together or stake them. They should be watered during prolonged dry spells and not transplanted once established.

[Pimpinella Plant Growing Guide | How to Grow Aniseed and Anise \(gardenshq.com\)](#)

Top Superfoods You Should Be Feeding Your Plants by [Florian Henrich](#)

I know what you're thinking; superfood for plants? Should I be mixing goji berries into my substrate?

The term 'superfood' has been around for quite some time. In the last decade, marketing agencies began using it to promote certain foods as particularly beneficial for health and well-being. Superfood by no means describes foods with an unusually high content of macronutrients, such as proteins, fats, and carbohydrates, because that would make low-fat curd cheese, palm oil, and sugar superfoods par excellence. Instead, the term refers to foods that contain many substances that otherwise occur only in small amounts, and which are said to have a health-promoting effect, such as omega-3 fatty acids.

How can this concept be transferred to your garden?

Like the above definition, I refer to such substances as a superfood for plants, whose effect goes beyond the provision of nutrients and has a positive impact on their vitality. They are, therefore, substances that are not necessarily rich in macronutrients, such as nitrogen, phosphorus, and potassium, and yet have a significant influence on plant growth.

Similar approaches are largely ignored in conventional agriculture, where nutrient salts are poured over the root ball of the plant to increase yields. For example, stinging nettle manure is denied any effect because it contains hardly any nutrients. However, it is rich in silicates, enzymes, and bacteria, and thus, promotes an active soil life, a robust plant, and improved nutrient uptake.

Let's take a look at the various plant superfoods:

Ascopyllum nodosum

Brown knotweed (*Ascopyllum nodosum*) is a brown alga common in the North Atlantic. Along with trace elements, it is rich in cytokinin, a phytohormone that stimulates the cell division (cytokinesis) of plants and regulates the aging process. The name alone indicates that this phytohormone activates the metabolism of the plant and leads to improved yield. In 2011, it was shown that an increased cytokinin level leads to an abundance of large flowers and fruits.



Picket Fence Urban Farm Closed till Jan 9th Open Monday, Thursday & Friday

The mechanism behind this is related to the control of the aging process: cytokinin delays the development of plant stem cells into flower cells. As a result, they simply continue to grow before differentiating into flower cells. With more flower attachments, more flowers are eventually formed. Ascophyllum is an excellent supplier of alginic acid. Alginic acid gels with calcium to form calcium alginate, which increases the water retention capacity of the soil and promotes root formation.

The brown Knotentang supports the plant on multiple levels. Although it provides little nitrogen, phosphorus, and potassium, it is a reliable partner in organic farming.

Alfalfa

Snail clover, better known as lucerne or alfalfa, owes its name to its fruiting bodies, whose shape is reminiscent of a snail shell and is cultivated mainly as a fodder plant. An important but hardly noticed feature of this plant is its high content of the phytohormone triacontanol. This phytohormone accelerates cell division and leads to stronger growth of roots, shoots, and flowers. When used as a foliar spray, it increases the concentration of carbohydrates and enzymes in the plant. Lucerne is an excellent source of nitrogen, micronutrients, and trace elements. When alfalfa and Ascophyllum are used, plants react to the increased availability of phytohormones like an athlete to steroids: with more power! For this reason, alfalfa has been used in American agriculture for many years with numerous products available for purchase.



Bentonite (silicates)

Bentonite is a valuable tool in organic farming. It consists of at least 60% montmorillonite, a silicate that has a surface area of 400-600m²/gram and expands in water. Due to its high ion exchange capacity, bentonite easily forms the valuable clay-humus complexes, increases the water retention capacity of the soil, and promotes a healthy soil life. Clay-humus complexes are formed by the binding of clay and humus particles to nutrient particles. The electrical charge of the nutrients is balanced, and thus, the ion pressure on the root membranes of the plant is reduced. Also, the crumbly structure of the clay-humus complexes permanently improves the soil.

Bentonite is also an excellent supplier of silicates. Although silicate compounds are among the most frequently occurring groups of substances on our planet, they are not always available to plants at the same time. Sand, for example, consists mainly of silicates, but hardly dissolves in water and is ultimately not available to plants. Soil microorganisms easily convert bentonite silicates into orthosilicic acid, which is rapidly taken up by plant life. Silicates play a vital role in the growth of plants because they are built into the cell walls, increasing the resistance to sucking insects and harmful fungal and bacterial infections. The increased availability of silicates improves the absorption of nutrients, increases the plant's stress tolerance to various environmental factors like heat and drought, and also increases the dry weight of the crop.

Earthworm humus

Plants love earthworm humus! Even a few tablespoons of the stuff can work wonders. Earthworm humus, [like vermicompost](#), has become increasingly popular in recent years, and not without reason. It is the highest quality compost of all and more fertile than all other humus species. It surpasses garden compost, bokashi, and terra preta by far – not to mention commercially produced humus. It is straightforward to make with the help of a worm farm and is an excellent way to recycle organic waste.

The secret of earthworm humus begins in the digestive tract of earthworms. The worms eat the organic substance decomposed by fungi and bacteria, grind it in their intestines, and excrete it again. Vermicompost contains useful fungi and bacteria and is enriched with enzymes such as phosphatase and cellulase. These enzymes help plants release nutrients from the soil and break down cellulose into carbohydrates.

The most significant advantage of earthworm humus over other humus species is its richness in clay-humus complexes. In the intestines of earthworms, there are particularly favourable conditions for their development. In clay-humus complexes, the electrical charge of the nutrient particles is balanced by binding them to a humus particle (e.g., leonardite) and one clay particle (e.g., bentonite). This prevents the soil from becoming salty or over-fertilised with vermicompost! Also, the crumbly structure of the clay-humus complexes loosens the soil and improves its water retention. If you ask yourself now what happens when you feed your earthworms with superfood, then it's high time for your worm farm.

Leonardite

Virtually every fertiliser manufacturer has a leonardite product in the form of humic and fulvic acids in its range. The use of leonardite intensifies plant and root growth by promoting the metabolism of plants and accelerating cell division. Leonardite also helps improve photosynthesis by stimulating chlorophyll production.

Leonardite is produced when organic matter is decomposed and then exposed to high pressure under exclusion of air for millions of years. The expert describes these processes as humification and charring. In the narrower sense, leonardite is high-oxidized soft lignite, which is a by-product of lignite mining. Leonardite is often processed into water-soluble potassium or sodium humate.

The fields of application of these humate salts are almost inexhaustible. As permanent humus, they improve soils or substrates sustainably, can be used for wastewater treatment, are used as additives in animal feed, strengthen the immune system, promote intestinal health, are used for the treatment of liquid manure, and reduce the emission of greenhouse gases such as methane. The biggest advantage of using leonardite for horticulture is its richness in carbon, as well as humic and fulvic acids. These substances promote plant growth and soil fertility. Humic and fulvic acids are so-called chelates; they can balance the charge of nutrients by cation exchange (cf. clay-humus complexes).

This ensures the availability of nutrients and trace elements over a more extended period without the danger of over-fertilizing plants. Humic substances also increase the water retention capacity of the soil and act as a pH buffer. They improve the germination rate of seeds, increase the vitamin and mineral content of plants, lead to thicker cell walls, and thus, to greater resistance to pests and higher harvest weight.

Animal meal

Good thing plants don't have a nose because some of these soil amendments can smell horrible. Horn shavings, along with fish, bone, and blood meal are guarantees of success among solid organic fertilizers. Plants love these raw materials because they provide readily available nitrogen, phosphates, calcium, micronutrients, trace elements, and amino acids. The result is robust root, leaf and flower growth, as well as an outstanding aroma of the end product. Also, the excellent availability of nutrients, especially nitrogen, stimulates the plant's hormonal balance. More auxins are formed in the shoot tips, and more gibberellins are released. Both substances are phytohormones, whose effect on plants is comparable to that of hormones on the human organism. The high concentration of auxins in the shoot tips not only improves the vitality of plants in general, but it also enhances the rooting of cuttings. Gibberellins are known in research as steroid hormones, so they rapidly boost plant growth. They have long been used in conventional agriculture in a synthetic form with auxins as growth stimulators, doubling the yield performance of some crops. The production of phytohormones stimulated by animal meal cannot keep pace with the results of synthetic auxins and gibberellins. However, there are significant improvements in vitality and yield.

Blood meal has hardly been used as an organic fertiliser since the BSE crisis, and the use of fish and bone meal is often viewed with suspicion. Blood and bone meal mostly come from poultry and pig farms, while the horn shavings, which are considered harmless and much more widespread, come from cattle. The processing of animal by-products is subject to strict regulations, and a veterinarian regularly inspects the processing companies. The costly approval of a company to process animal by-products has also contributed to the fact that they are hardly used as organic fertilisers. The use of animal by-products in the form of organic fertilisers is a good way of recycling them and a sensible alternative to the incineration of these substances.

Conclusion

You don't need to enrich your substrate with chia seeds, nor do you need to soak your seeds in pomegranate juice for germination. Simply pay attention to what is in the fertilisers you buy. If you keep your eyes open, you will surely find a product with the inputs mentioned in this article.

The superfood concept for plants can be the beginning of a new way of thinking about fertilisers. Perhaps one day, the principle can be transferred from allotments to agriculture, and we will all cultivate our fields naturally and sustainably, in harmony with nature.

[Top Superfoods You Should Be Feeding Your Plants | Garden Culture Magazine](#)

Soil

DIRTY TALK CLEAN PLANET

Want to know something funny? Clean living relies on dirt. That's because soil is one of the most important parts of a thriving natural world. As a home for plants, animals, and fungi, it serves as the building block for literally all life on earth—and also helps with carbon storage, decomposition, and land preservation. But with rising pollution, deforestation, over-farming, and extreme weather, soil health is currently compromised—and there are things you can do to help the earth stay grounded. (Sorry! 😬) So let's dig in. (SO sorry! 😬 😬)



WHAT IS HEALTHY SOIL?

When we talk about "healthy soil," we mean dirt that lets living things—plants, fungi, insects, algae, all that good stuff!—grow to their fullest potential. Healthy soil is power-packed with "organic matter," which includes bacteria and fungi that help soil retain water, vitamins, minerals, and even natural antibiotics. The more "organic matter" that soil holds, the healthier it is.

WHAT DOES HEALTHY SOIL ACTUALLY DO?

According to the USDA, soil fulfills five essential functions for the earth and all its inhabitants (including us).

- **Soil is a traffic cop for water**
Soil regulates water flow to prevent flooding and erosion.

- **Soil is a luxury condo for organisms**
Soil homes and feeds billions of living things, including plants, fungi, animals, and algae.
- **Soil is a Jedi against pollution**
Soil uses its force to filter, buffer, and even degrade small amounts of toxins and heavy metals, preventing them from harming organisms on land and water.
- **Soil is the UPS of nutrients**
All day long, soil “ships” the building blocks of life—carbon, nitrogen, phosphorus, calcium, and more—from decomposed matter back to plants and animals, enabling one of the most important natural cycles in the world.
- **Soil is ground zero for life**
Soil physically anchors plants and fungi, along with plant and animal habitats and human buildings. Soil is literally what keeps our world stable.

WHY SHOULD WE CARE ABOUT SOIL HEALTH?

We know soil health and human health are connected in part because of The [Rodale Institute](#), a non-profit research foundation that’s leading the way in sustainable agriculture. Through Rodale’s partnership with Wild Elements, we’re learning more about the connection between soil and people than ever before thanks to leaders like Dr. Gladis Zinati, who’s helming the [Vegetable Systems Trial](#). Basically, she’s measuring the nutritional value of organic veggies with the same vitamin and mineral content found in veggies grown on a mass scale.

According to Rodale, “the nutrient density of fruits and vegetables grown in the U.S. has declined in the past 50-70 years,” leading to “hidden hunger”—people getting enough calories but “not the vital nutrients necessary for health.” Dr. Zinati’s team is also measuring the health of the *soil* when organic produce and non-organic produce are grown in adjoining plots of land. (Spoiler alert: In [past Rodale Institute studies](#), organic fruits and organic vegetables increase the health of the soil where they’re grown.)

HOW IS SOIL HEALTH DOING RIGHT NOW?

Not great. According to a 2018 study, about 75% of the earth’s soil is [substantially degraded](#). That’s due to overplanting, deforestation, pollution, and extreme weather like droughts and floods (which are caused by—all together now—overplanting, deforestation, and pollution). But as the world population grows, we need *more* healthy soil to ensure every living thing has the nourishment it needs to thrive.

HOW CAN WE HELP PROTECT SOIL HEALTH?

Thank you for asking! Here are some small steps you can take to help keep soil safe.

- **Shop for organic produce when possible**
Rodale Institute studies dating all the way back to the ‘80s show that when farms use sustainable harvesting techniques, the health of the soil improves. Now, Rodale is helping farmers transition their fields into organic soil—a process that takes about three years. Buying and eating organic fruits and vegetables won’t just help *you* stay healthy; it’ll help the earth stay healthy, too.
- **Nix pesticides on your lawn or garden**
If you’re lucky enough to have a backyard, front yard, or garden, be mindful of your own soil. There are plenty of cheap and [non-toxic ways](#) to keep unwanted bugs and animals out of your lilac bushes or tomato vines, including mosquito nets, eucalyptus oil, and even a simple salt spray.
- **Cut down on plastic use**
A recent German study found that [33% of microplastics](#) end up in our soil and groundwater, which is *really bad!* We can help stop the influx of microplastics by taking small steps like using reusable water bottles instead of plastic ones, asking our favourite takeout spots to stop giving us plastic utensils, and bringing our own mugs to cafes. (Many will even give you a discount on your coffee if you do!)
- **Compost**
Farmers call compost “black gold” because it’s so beneficial to soil health. You can help put your food scraps back into the land by composting daily in your backyard, or weekly through a local farmer’s market or city parks organization. Check out NPR’s [guide for beginners](#), or Google “composting near me” to see what’s available in your area.
- **F****ING VOTE!**
Of course, regulating plastics and ending legal pollution must happen at the legislative level. So we can also [VOTE](#) for politicians who support plastic bans at major corporations, increase pollution fines for

corporations adding toxins into our land, and hold fossil fuel companies accountable for their damage. We can also participate in local politics to ensure public parks cultivate their land responsibly and sustainably.

IS THERE A TLDR VERSION?

Okay, so... healthy soil keeps us all alive *and* it makes our food taste better and do better work in our bodies. We need to protect it by supporting organic farmers, using natural products in our own gardens, and stemming our addiction to plastic water bottles. We can learn even more through our friends at the [Rodale Institute](#), because they love talking dirty even more than we do.

[How to Create Healthy Soil – Wild Elements.com](#)

Eco Living

Zero Waste Living 2: The Next Steps [EMMA GIBBS](#) OCTOBER 31, 2022

You've got the fundamentals of how to live zero waste down pat. Now it's time for step two of your journey.

So you've read [part one of our zero waste living series](#), and you're convinced – living zero waste is the only (sustainable) way forward. You've committed to using reusables instead of single use plastic items, you're [composting your food scraps](#), and you've got an impressive collection of glass jars, which you take with you when you do your weekly shopping at the bulk foods store.

At this stage many people either experience zero waste "fatigue" – where the initial momentum of adopting a zero waste lifestyle has worn off and the excitement of zero waste discoveries (olive oil works just as well as a store bought cleanser!) begin to lessen.



Or they look around and realise that there are still so many areas to tackle; they're just not sure which ones to address first.

We're here to help! Here are the next steps to take in your zero waste living journey.

Limit or reduce new purchases

Putting a stop to any regular purchases you make, especially clothing and homewares, will obviously reduce the amount of waste you produce. Not only can these items themselves create waste, when they often end up in landfill [after only a few wears](#), but the packaging they require also end up as waste.

Start being discerning about who you buy from if you must purchase something brand new. Research how a brand's clothing is manufactured. Download the [Good On You](#) app, which provides ethical ratings for thousands of popular fashion brands.



When making purchases online, email the company and ask that a minimal amount of packaging be used (although most eco-friendly brands will wrap their wares in biodegradable or compostable packaging already), or if you buy items in-store, hand over your own bag.

Or better yet, buy second-hand!

Swap out your bathroom products with zero waste alternatives



Some people find this area of zero waste living a little tricky. When you're used to sweet smelling lotions and potions it can take a little time to get used to more natural alternatives.

Swapping out your bottle of liquid body wash and hand soap for a simple [bar of soap](#) is one of the simplest and impactful ways of reducing your plastic waste.

You can reduce plastic waste further by making some (or all!) of your own beauty products from scratch, like [plastic free deodorant](#), [homemade toothpaste](#), [body scrub](#), [shampoo](#), [shaving soap](#) and [gardener's hand scrub](#).

[In this article](#) we also bring you 15 more ways to go zero waste in the bathroom.

So as not to waste products, start replacing your existing makeup as it runs out. If you use several products this will also make the job easier, as replacing all your makeup in one go with zero waste items could seem like too much to tackle.

While it may take some time to find the perfect makeup products for your needs, a good place to start is with a makeup brand that specialises in low/zero waste packaging.

[Dirty Hippie Cosmetics'](#) makeup range includes mascara, eye shadows, eyeliner, primer, loose powder, BB cream, concealer, blush, and cheek and lip tints.



When it comes to makeup, it may take a little trial and error until you find the best replacements.

They offer refills when you return their full-sized tin and bottle products, and all product labels are printed in-house using vegetable-based ink and recycled paper.

Give your cleaning regime an eco-friendly makeover



[We've already talked about](#) why choosing non-toxic products to clean your home is so important for your health and the health of the planet.

There are so many nasties in common everyday household cleaners so eliminating them from your home (via the [Detox Your Home program](#) if you live in Victoria, or your local council's equivalent) will do you a world of good.

It's also a huge step towards being able to live zero waste as all those bottles of glass cleaner, floor cleaner and all-purpose spray add up. Most of which will most certainly [never be recycled](#).

You have two options for zero wasting your cleaning regime. You can source eco-friendly cleaning products from a bulk foods store, or you can make your own. Try out our recipes for [homemade cleaning products](#) and [homemade laundry powder](#).



[Zero Waste Living: The Next Steps | Pip Magazine](#) [Zero Waste Living: The Next Steps | Pip Magazine](#)

St Marys Picket Fence Site Market January 28th from 9.00am till Noon

Sales From Community Centre, OP Shop, Project Centre and the Urban Farm

1167 South Road St Marys

Ring 8374 2522 For Details

Living Fences Using Plants to Define Your Boundaries –

Living Fences

With Mara Ripani 18 Aug 2022

Mara Ripani is Permaculture Australia Professional Member – you can find her at <https://villagedreaming.com.au/>

Fences are often necessary for privacy, security and the safety of pets and children. As Mara Ripani explains, there are myriad ways to create them with plants, adding extra greenery to our built environment.

With populations increasing and cities and towns growing, we need to take every opportunity to introduce green into our built environment: 'rewilding' our surroundings, even in small ways. A living fence is a simple and effective way to start. There are many approaches to creating a living fence: what they all have in common is a thriving explosion of plants!



What is a living fence?



Fences are commonly used for creating privacy (both visual privacy and by preventing access), for keeping pets and children contained and safe, and simply for marking property boundaries. With a bit of planning, all of these requirements can be fulfilled with a living fence: one that is made using plants on their own or by combining plants with an appropriate structure.

Depending on its main purpose, the space available and your aesthetic preference, a living fence can take the form of closely-planted clumping grasses, a hedge created from shrubs, a line of small trees or espaliered fruit trees, or a cascade of tendrils and flowers from a climbing vine – to name just a few possibilities.

Why choose a living fence?

No matter how small your property, if there is room for a fence then there is probably room for a living fence. Well-kept living fences are extremely beautiful. Evergreen plants provide a verdant wall to look at all year round. Climbing plants with flowers provide colour, interest and architectural shapes to admire. A living fence is an extension of your garden, allowing you to layer greenery to create depth and texture. And if you already have a standard fence, you can breathe life into it with a climbing plant.

Cooling microclimates

While living fences add a great deal of beauty, they can also help green our cities and create cool microclimates. Built-up urban areas are prone to the urban heat island effect: dense concentrations of pavement, buildings and other thermal mass surfaces absorb daytime heat, releasing it again at night. As a result, ambient temperatures can increase by one to three degrees Celsius. Greening infrastructure projects large and small, including living fences, can help counter this effect through the plants' natural transpiration.

How to choose plants for a living fence

When deciding on the style and plant selection for your living fence, consider its purpose, maintenance requirements, and how it will fit into your existing garden. Whether you opt for native or non-native species, always ensure you avoid species considered invasive in your area. Be careful

that your living fence does not impede communal walking paths, and consider traffic sightlines where necessary – especially for cars exiting driveways.

Grasses

If your main priority is boundary marking, a living fence can be as simple as planting a row of ornamental grasses. There are many choices: *Poa labillardierei* (Common Tussock-grass) *Pennisetum alopecuroides* (Chinese Fountain grass), *Lomandra hystrix* (Green Mat-rush,) *Miscanthus sinensis* (Chinese Silver grass), *Schizachyrium scoparium* (Little Bluestem) to name but a few. Be sure to choose perennial grasses that will live year after year, either evergreen or grasses that will dry to a sandy or copper colour, marking the changing seasons. Some grasses have spiky foliage or sharp edges hence consider their appropriateness. Grasses can be cut back in late winter or left uncut for a few years. When cut back they reappear as vibrant green tufts in spring.

Shrubs

Privacy and safety for children and pets can be achieved with shrubs planted to make hedges (though note that hedges need dense foliage or supplementing with a wire fence to reliably contain small pets). There are many shrubs to choose from, and garden nurseries offer plenty of information on the growing requirements of plants to help you make your selection. Look for plants in the following genera: Acacia, Westringia, Acmena, Yew, Thuja, and Laurel to name but a mere few. Search for plants that suit your soil type and climate, and be sure to check the height, width and growth rate. Fast-growing hedges will establish quickly but need more frequent pruning, watering and compost. Slower-growing hedges can take years to establish but will then need less maintenance.

Also consider colour, foliage texture, and whether you'd prefer evergreen or deciduous. An evergreen shrub will stay green all year round, while deciduous species will change colour before (usually) dropping their leaves. For example, *Berberis thunbergia* (Japanese Barberry) is a deciduous shrub that goes from green to bright red foliage in autumn. For silver foliage try *Westringia fruticosa* (Native Rosemary), *Teucrium fruticans* (Tree Germander), or *Pittosporum tenuifolium* 'Silver Sheen' (*Pittosporum Silver Sheen*)



Trees

A line of small trees can also be used to create a fence, or to green an existing fence line. A popular choice is any tree in the conifer family with a tall, narrow form; plant them as close as planting instructions will allow.

For an 'edible fence', you can espalier fruit trees. Espaliering is easy to do, saves space and allows even small garden owners to access seasonal fruit. Buy bare-rooted trees and plant in winter, and explore the many instructional videos on different espaliering techniques available online.

Climbing vines

Climbing vines on a structural support can form a fence for privacy and for containing animals and kids. Choose evergreen plants for year-round screening or deciduous ones for a flash of autumn red followed by bare branches. You can use metal mesh or tensioned wire on a structural frame or a wooden fence to support your vines; remember that climbing plants are heavy once established so make sure the structure is able to support the weight.

There are many fantastic climbing plants to choose from. The evergreen *Hardenbergia violacea* (Purple Coral Pea) produces a mass of gorgeous purple pea flowers. *Pyrostegia venusta* (Golden Shower) has stunning orange trumpet flowers and climbing tendrils. *Trachelospermum jasminoides* (Star Jasmine's) sweet fragrance, *Rosa banksiae*'s (Lady Banks Rose) rose clusters and the tiny fairylike leaves of *Muehlenbeckia complexa* (Maidenhair Vine) are all attractive options. If your home or rental property has an existing brick or masonry fence then try *Parthenocissus tricuspidata* (Boston Ivy) with its burnt red autumn leaves, or *Ficus pumila*'s (Creeping Fig's) attractive juvenile leaves.

Before planting

Whether you opt for grasses, shrubs, trees or climbers for your living fence, do your plant research. How will the plant grow? How will it change over time? What level of maintenance will it need? Will it drop leaves? Might its root system cause any long-term problems? While it is good to be aware of these things, however, don't get overwhelmed: generally, the value of a living fence far outweighs its care needs. And one final piece of advice: if establishing a new fence, it's a good idea to do a property boundary search via your relevant state agency to ensure you're putting the fence in the right place and not on your neighbour's property.

Whether you live in a city, a regional town or in the bush, infrastructure like fences is often necessary. Likewise, rewilding our living environments is important, and easy to do. A living fence is a great way to combine the two, and the benefits will be experienced by you and all that pass by.



[Living fences: Using plants to define your boundaries – With Mara Ripani | Permaculture Australia](#)

Fertilisers and pesticides 'confuse bees'

Bees

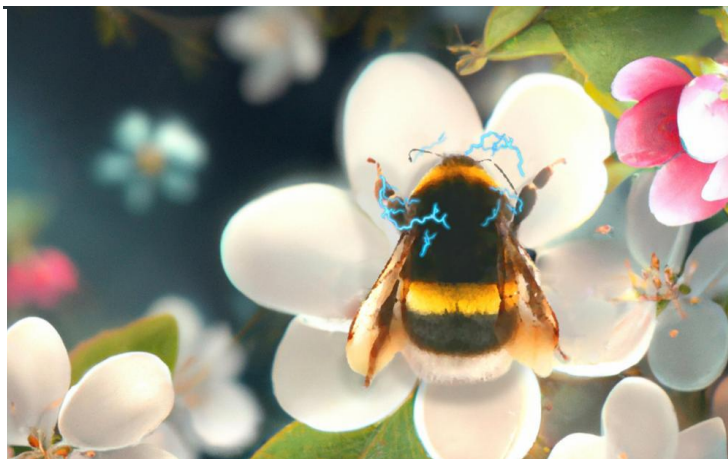
Brendan Montague 9th November 2022

Agrochemical application can distort floral cues and modify behaviour in pollinators like bees, study confirms.

Pollinators are less likely to land on flowers sprayed with fertilisers or pesticides as they can detect electric field changes around the flower, researchers at the University of Bristol have found.

The study, published in *PNAS Nexus* today, shows that chemical sprays alter the electric field around flowers for up to 25 minutes after exposure.

This impact lasts substantially longer than natural fluctuations, such as those caused by wind, and causes a reduction in bee feeding effort in nature.



Artists impression of bumblebee interacting with flower.

Pollinators

Dr Ellard Hunting of Bristol's [School of Biological Sciences](#) and his team noted that fertilisers did not affect vision and smell, and set out to mimic the electrical changes caused by fertilisers and pesticides in the field by electrically manipulating flowers.

The fertilisers are a source of noise to bees trying to detect floral electrical cues.

This showed that bumblebees were able to detect and discriminate against the small and dynamic electric field alterations that are caused by the chemicals.

Dr. Ellard Hunting said: "We know that chemicals are toxic, but we know little about how they affect the immediate interaction between plants and pollinators."

Nanoparticles

"Flowers have a range of cues that attract bees to promote feeding and pollination. For instance, bees use cues like flower odour and colour, but they also use electric fields to identify plants."

"A big issue is thus - agrochemical application can distort floral cues and modify behaviour in pollinators like bees."

Furthermore, various other airborne particles such as nanoparticles, exhaust gasses, nano-plastics, and viral particles may have similar impacts, affecting a wide array of organisms that use the electric fields that are virtually everywhere in the environment.

Co-author, Bristol's [Sam England](#), explained: "What makes this study important is that it's the first known example of anthropogenic 'noise' interfering with a terrestrial animal's electrical sense."

Interfering

"It's much like motorboat noise that hinders the ability of fish to detect their predators, or artificial light at night that confuses moths: the fertilisers are a source of noise to bees trying to detect floral electrical cues."

"This widens our understanding of the multifaceted ways in which human activity is negatively impacting the natural world, which can seem quite depressing, but it will hopefully allow us to introduce or invent solutions to prevent the adverse effects that these chemicals may be having on bees."

Dr Ellard Hunting added: "The fact that fertilisers affect pollinator behaviour by interfering with the way an organism perceives its physical environment offers a new perspective on how human-made chemicals disturb the natural environment."

[Fertilisers and pesticides 'confuse bees' \(theecologist.org\)](https://theecologist.org)

Dirty Diggings February 2023

Permaculture and Agroecology

Biosphere and Technosphere

Insects and Extinction

10 Top Things to Consider when Greening Your New Home

[Zero Waste Living 3](#)

[The electrical language of fungi](#)



