



Bundaberg Organic Gardeners

~ working with nature ~

Page |
1

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NEWSLETTER OCTOBER 2021

Hello and welcome to our October Newsletter. What a perfect day to sit down and write our BOGI newsletter. I spent just about all day doing what wasn't on my long list of things to do, and loved every bit of it. Yes, gardening. I love that gardening is something our whole family can enjoy on different levels. The children both have their own plans of what they need to plant and how they envisage the growing process. It gets very, very messy and unnecessarily muddy but it's always a happy place for us all to be.

Days like these are wonderful for sharing knowledge and opening conversation while working on something together, even if it is a mud pie. We are so lucky to fall back on other members of BOGI who have such a wide range of knowledge and I feel it's really important that we share it when we can. Outside of our club meetings, our webpage and newsletters, let's try and keep the conversation going about WHY we feel growing food and caring for our environment is so important.

I would love to hear from you if you have had a moment of "Aha!" that made you switch to growing organically and never looking back. (Cathy)

Mark your calendars!
Our annual Christmas Party will be held in our usual location at the Baldwin Swamp Shelter Shed on Sunday 28th November, 10am -2pm.

More information to be given at the meeting.

26th October - Meeting
28th November - Christmas Party
30th November - Meeting
25th January 2022- First meeting of the year.

CLUB MEETING

Time: Doors open 6.00 pm for a 6.30 pm start **Guest Speaker:** To be advised

Venue: McNaught Hall (Uniting Church Hall) Corner Barolin and Electra Street, Bundaberg

Attendance \$3-member, \$5 visitor, Tea Coffee avail, Members please be reminded to wear your badges to the meeting

Tuesday 26th October

Get your lucky door ticket, bring something to share on the giveaway table, share some free seedlings.

Due to Covid restrictions easing we are now welcoming members to bring along a plate of food to share at the end of the meeting. Please don't feel that you must bring something, and let's try and keep it healthy, in the spirit of organically home-grown food. For example, homemade tomato relish with some store-bought crackers. Please list ingredients to assist those with allergies and intolerances, and share recipes where you can.

From the Last Meeting.

Last month at the end of the meeting we enjoyed a lovely tea by Julie Burry. The tea of the month was Parsley.

Parsley Tea is a powerhouse, not just a garnish. Parsley tea is a delicious and cheap way to make the most out of parsley's many nutrients and vitamins. Parsley is full of antioxidants, specifically rich in ascorbic acid or vitamin C. Collagen needs vitamin C to help your skin, hair, bones, joints, tendons and muscles stay strong and healthy. The chlorophyll in parsley is antibacterial and anti-fungal helping your immune system fight viruses, auto-immune diseases and chronic inflammatory disease. Parsley is also a diuretic and rich in iron.

I always look forward to Julie's tea combinations at every meeting. Thank you Julie for sharing them with us all.

Our speaker for the September meeting was Trevor Galletly. At short notice he was asked by President Maureen to tell us, **"How did you get to here, in your ag career."**

After studying at university for four years, Trevor graduated as an Agricultural Scientist. Around that time, most Ag Science graduates continued their work with either the government or chemical companies.

However, Trevor went to work with an international company specialising in the production of hybrid sorghum, maize, millet and wheat. Hybridising involves taking pure breeding lines of suitable varieties and naturally inter-breeding them to improve yield. (This is not in any way related to genetically engineered plants.)

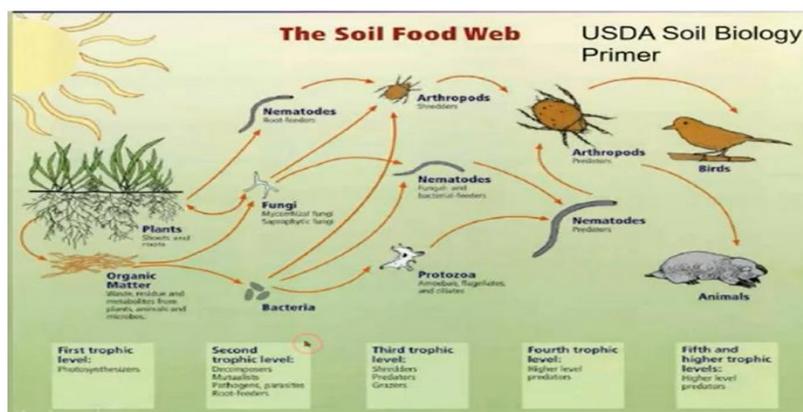
After Trevor came to Bundaberg, he worked for an agricultural supply company and was involved in laboratory and crop monitoring services. This included making recommendations of soil analysis, and what the farmer needed --- the standard recommendations were more motivated towards selling fertiliser products than what the crop really needed.

In 1990, Trevor started working in his own business as a crop consultant, and attended an organics conference in Melbourne, the first to be held in Australia. At that time, organics was in the very early stages of development in Australia and the world. Since then, alternative agriculture is ever-changing. Some of the leading alternative American agronomists include Phil Callaghan, Dan Skow, Garry Zimmerman, Harrold Willis, Charlie Walters and William Albrecht.

Due to illness in 1990, Trevor left the ag industry, but continued to follow his passion for understanding and knowledge in this field. Now in 2021, organics is still a developing science.

As more information is learned, and has become available in literature, three prominent key researchers/workers continue to lead this ever-developing field:

Elaine Ingham from America developed the soil food web (which shows microbes and animals in the soil, and how they interact). She has developed laboratories and given workshops world-wide on her knowledge and understanding of the soil food web.

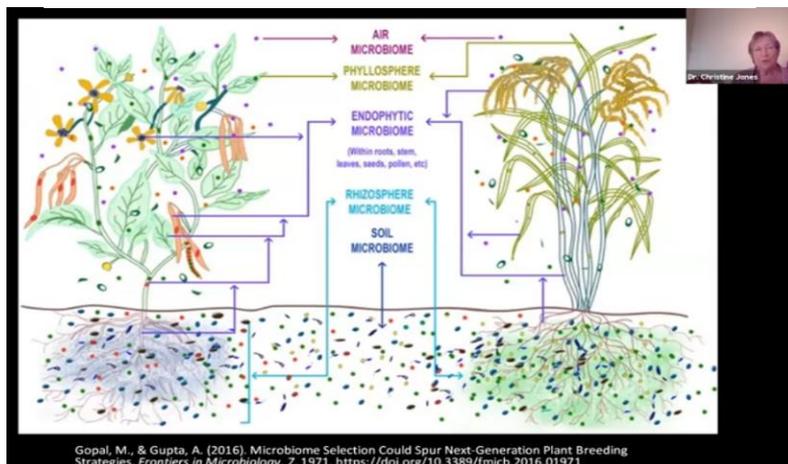


David Johnson from California – has adapted information based on the human biome. The human biome is the aggregation of all biology that lives on or in the human body. He has developed the Johnson-Su Bioreactor for

developing world countries to use. This is a stationary aerobic cold compost incorporating worms. The compost produced is used to inoculate good biology into soil and is known as **BEAM** compost (**B**io**E**nhanced **A**gricultural **M**anagement).

Christine Jones from Armidale University, New South Wales, has travelled and given workshops on regenerative agriculture all over the world. She is unique in the scientific world for her ability to speak in everyday language, without the scientific spiel, for everyday people to understand. Some of her work highlights the need for **diversity of plants** and consequently soil biology e.g., ecosystems require plants from at least 4 different families to create a healthy ecosystem. Also, her work emphasises how plants and biology **actively pump carbon** into the ecosystem. Root exudates (sugars that plants ooze from their roots) to feed bacteria and fungi in the soil.

This image shows bacteria and fungi in the soil, inside the plant and on the leaves, the same as our bodies!!



These three people have been some of the key-players in developing the knowledge of fungi and bacteria, and how this relates to growing food. Through their studies and practice they have also shown the soil's ability to rapidly build up and return carbon to the soil in 1-5 years. This involves maximising plant photosynthesis, with the root exudates feeding the bacteria and fungi in the soil.

Some unfortunate consequences of modern farming practices have broken nature's cycle and caused the massive destruction of carbon in the soil. This is now possible to be quickly reversed by using the knowledge and methods of these three researchers --- resulting in **Rapid Carbon Sequestration** or build-up of carbon in the soil.

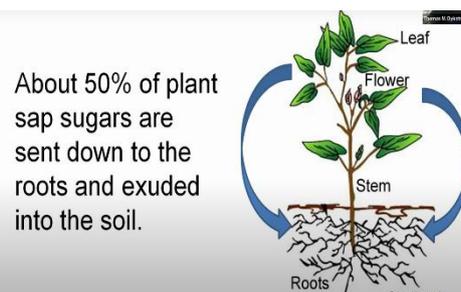
Some **Barriers to the adoption** of favourable practices are:

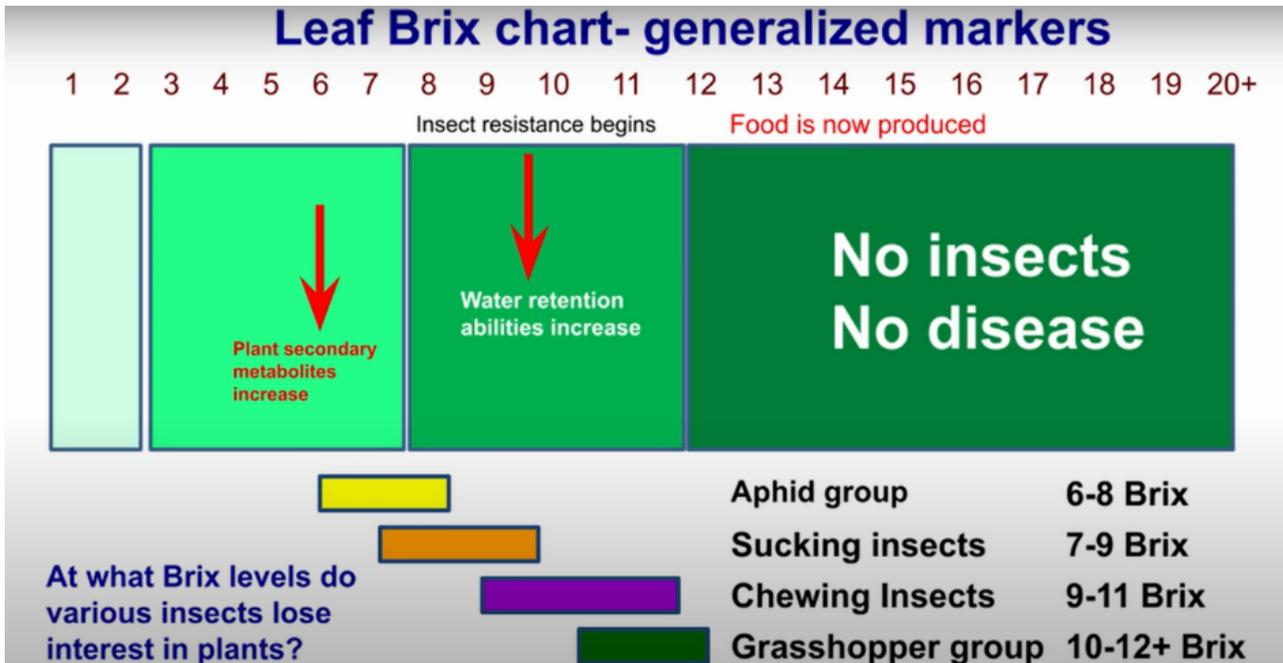
- The need to change the farming practices of our farmers
- Currently, farmers accept advice from fertilizer and chemical salespeople (big people with big dollars)
- There is currently no alternative network to implement change.
- The transition requires the acceptance of new knowledge, and a change of practice (farmers need to change their farming methods and how they were taught to farm). These changes cannot be dollar-driven --- because the changes required are low in cost. The new methods of farming are not yet widely known, and to date, farmers have chosen to continue with the 'traditional' farming methods.

What about diseases and insects – a lot of research indicates that plant health can be measured by a refractometer – a simple measure of the sugars in the leaf sap.

Healthy plant = lots of sugars – and no insects.

We now know that by balancing biology and plant nutrition we can greatly influence the plant health, thereby overcoming disease and insect problems.





The higher the Brix, or plant health, the less diseases and insects.

Of particular interest, Trevor has developed **Oakwood BEAM Starter** which is a low-cost method of enhancing indigenous soil biology, giving quick results in improving soils and crops in 50-100 days. And we are showing that it can make farmers more money immediately as well as improving their soils for the next crops.

Where to from here – Trevor is interested in presenting the knowledge of Oakwood BEAM starter to farmers by conducting workshops and written instructions. This process is designed for the simple production of the biology for soil or plant application. The process includes two main steps:

1. The starter is derived from local naturally produced compost. This is fed with a carbohydrate and molasses and allowed to grow.
2. The starter is then placed in water on the farm and aerated in a large container and applied in the soil 24-36 hours later.

OAKWOOD BEAM STARTER---DEVELOPED IN BUNDABERG

Unlimited quantities, with local biology, short lead time

Low cost to farmer.

Summary: David Johnson, Elaine Ingham and Christine Jones have shown this rapid carbon fixation system can exceed the world’s annual carbon dioxide emissions and build soil carbon reserves back to where nature had them. It will allow us to have healthy, nutritious foods, and a better world to live in.

What is photosynthesis?

- Light is the energy that allows the plant to take the carbon dioxide from the air, with water and nutrients, and release oxygen to the air.
- This produces what we know as sugars, which allow the plant to function and grow.
- The plant pushes approximately 50% of these sugars into the soil to feed the biology. The biology then fixes carbon in the soil and returns nutrients to the plant, naturally producing healthy, nutritious foods and looking after the environment.

Photosynthesis and plant root exudates are now recognised as constituting the primary pathway for soil-building

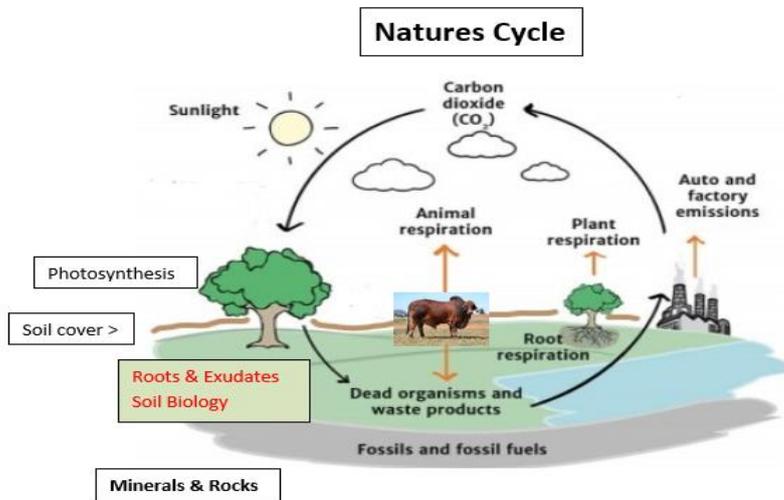
Plant root inputs build soil carbon 5 to 30 times faster than carbon derived from above-ground biomass

There are many and varied interactions between

- **Plants & microbes**
- **Microbes & plants**
- **Microbes & microbes**

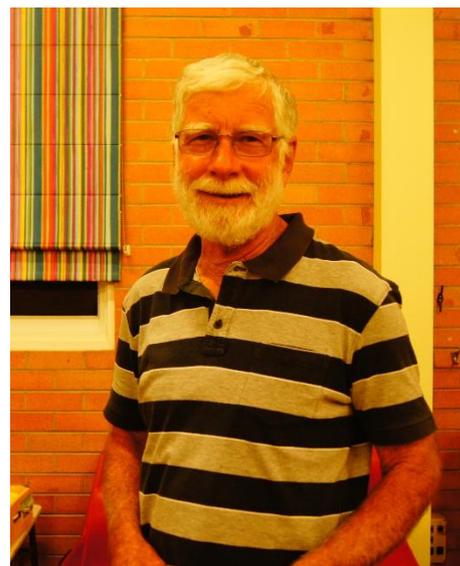
Challenges Ahead!

- Produce higher quality and more nutrient dense food,
- On declining land area,
- Using less water,
- Fewer energy and natural resources
- Do all of this under difficult economic circumstances!
- With soils and ecosystems that are continually being degraded,



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Adapted from Alamy (2020) The Carbon Cycle



Thank you, Trevor, for your presentation, additional notes and slides.

***I am interested in attending a workshop on the Oakwood BEAM starter system to improve my garden and gardening methods... anyone else interested??? RSVP next meeting.

Deadly nightshade and potato family plants

We also discussed the “deadly nightshade” at our last meeting, with some unsure of what it meant, so here is a little explanation.

“Deadly nightshade” or “potato family” are plants that belong to the Solanaceae plant family. Solanaceae plants are flowering plants that can range in size from small herbs, climbers and trees. Many Solanaceae are edible, while others are considered poisonous. It is thought they are called “nightshade” because they will grow in the shade.

The Solanaceae are known for possessing a diverse range of alkaloids. As far as humans are concerned, these alkaloids can be desirable, toxic, or both, though they presumably evolved because they reduced the tendency of animals to eat the plants and apparently, they function as an insecticide while the plant is growing.

Some of the most commonly consumed nightshade vegetables include:

- Eggplants
- Peppers
- Potatoes (not sweet potatoes)
- Tobacco
- Tomatoes.

Note: The above text is excerpted from the Wikipedia article "Deadly nightshade and related plants", which has been released under the GNU Free Documentation License.

In Vol 16 of The Australian Rare Fruit review, Huckleberries, aka Black Nightshade, aka Solanum nigrum L. are listed as an edible weed.

Workshops and Field Trips

When: 24th October 9am.

Where: Pam Biden in Burnett Heads Pam has an extensive inside and outside garden with lots of propagation techniques.

Bring: Please bring morning tea and a chair. Phone 0447175180 to notify attendance, and for address.

Garden Visit to Carlyle Gardens Community Garden 3/10 21

This is a retirement village of 300 houses in Bargara. The garden rambles over about a hectare of land which includes, open gardens, shade houses and enclosures for seedlings and established plants and storage. On one side are mounds of mulch produced from contractors maintaining the general gardens. It started with one igloo and a meeting shelter in March 2017 with 7 people and now managed by 2. Now there are many igloos used to protect plants from predators. Fresh fruit and vegetable produce is provided for the residents each Monday morning for a donation. These include, zucchini, radish, lettuce, silver beet, beetroot, beans and capsicum.

Groves of natives, citrus, pawpaw, figs, peaches, mangoes and more, protect the garden from the easterly sea breeze. The ground was rock hard when started. Les has continually applied the old mulch as well as compost from 7 bins, and uses weed tea fertilizer (only good ones like dandelion, milk thistle). He adds, lime, blood and bone, some grass clippings to the mulch. The sprinkler system is recycled garden hose with a sprinkler tube stuck into it.

The trees are healthy and bear well and the produce is impressive. Here are a few organic tips.

1. Sap oozing on lower trunk- paint with lime paste.
2. Weed tea. ¾ bucket weeds. Good weeds like dandelion and thistle. Add handful manure and fertilizer and water. Leave 7 weeks. Dilute 1/3 to 2/3 bucket of water. Apply fortnightly.
3. For bugs. Garlic and female urine.
4. Fruit fly. Urine and vegemite mix.
5. Mildew on zucchinis. Wash with detergent and cut off.
6. Capsicum. Add lime to stop rot.

We had a cup of tea in the shelter and yarned a bit more, then off to Kelly's Reserve and the Mosaics at Crawford Park Bargara. Great energy and inspiration. (Written by Karyn Ennor)



After our visit to Carlyle Community Gardens, BOGI members travelled to Kelly's Creek, a small yet relatively natural creek situated behind Woongarra Scenic Drive and Kelly's Beach Resort. This creek, at most only a few metres wide and maybe only 200 metres long, had over the years, become infested with some of our worst weeds.

However, about 15 years ago, a small group of like-minded people formed *The Friends of Kelly's Creek* with the aim of protecting and enhancing the natural environment of the Creek. Weed removal and judicious planting with local native plants has transformed the area into habitat for a variety of native animals including frogs, fish, eels, water birds and last but not least, the white-tailed water rat (*Hydromys chrysogaster*).

What a jewel this area has become and Karyn, our hard-working Secretary has played a pivotal role not only with this area, but in many other revegetation and restoration sites around Bargara. Well done Karyn!!! (Written by Maureen)

Garden visit to 'The Haven' - Pam and Peter Burgess, Sunday 12th September 2021.

There was a great turn up of 18 people which included 3 children and some visitors. Pam and Peter were very excited to show us the results of their latest garden strategies. It's all about MULCH. In this case woodchip from garden clean up. "It changed our world", says Pam. It is one answer to the drought. Everything possible is mulched. It absorbs and contains the moisture. Upon observing a mound of mulched weeds, we saw the complementary bounty therein. Milk thistle for ducks, chickens and salads. Pineapple, nasturtiums, native grasses and Mustard weed. Nearby a heavily mulched fig tree bed that chooks had manured for 3 weeks, resulting in a smorgasbord of complementary plants with sambung in abundance. The citrus and lychee orchard, which had a severe pruning by Marlene and Malcolm last season, is now awash with blossoms.

We look at another bed described as Syntropic Agro Gardening. This is the old bamboo bed pulled out. There are layers and layers of plants each supporting the other in some way. For shade, bee attraction, mulch, nutrition and moisture retention. Standing tall are Lenzie's Giant Sunflowers. Nitrogen fixing Pigeon Pea bushes produce food for bees and protein for humans. Two Panama Strawberry Trees stand tall at either end. Vivid Orange Mexican Sunflowers mix with black huckleberry (not nightshade), Leafy Arrowroot, Pandanus and Bananas. Hiding beneath the foliage are giant Daikon Radish.

Further along is the pharmacy. This is a shade house with hundreds of comfrey plants which make up Pam and Peter's daily natural immune medicine script as well as an effective comfrey ointment. Further along are various structures including a recycled kid's climber, for beans and passionfruit.

The most important addition to the present success, is the use of water pods and a pump which delivers a full tank in 11 mins and is able to be used to hose water to most parts of the property. There are three dams. This has changed their lives in regards to time management. It's all about water and also shade. Quick growing shade plants like Panama Berry, Pigeon Peas, sunflowers, Arrowroot will give ample shade within 2 months. Pam believes "The right plants at the right time for the right reasons will give the right results."

Animals are all part of this cycle. A gaggle of runner ducks raced across our path. There is one male (with a curly tail) and about 8 females. They lay better than the chooks of which there are also. One very large rooster (Leghorn) with some happy Orpington hens. The animals provide manure, eggs, meat, eat weeds so grass can grow, and control insects. And there are many bee hives. Pam and Peter have a good system of inspecting the hive without disturbing the bees. Only a few are producing honey at the moment as the drought has affected pollen production.

The large area in the middle with a huge bamboo trellis, is The Summer Garden. The trellis supports some massive New Guinea Beans which grow as big as cricket bats as well as Madagascar beans. In this garden are many perennials, collard greens and so much more. As we walked Pam continuously pointed out bathtubs full of greens like Japanese menthe, Betel Leaf, Leaf Ginseng. And there are flowers everywhere, for the bees. In the summer garden there is a shade house, cloth covered to stop the summer bugs which afflict broccoli, cabbage, cauliflowers

and Chinese vegetables. Spring had arrived about a month ago so it's important to observe your garden for what the real seasonal weather is presenting.

After two and a half hours we sat down to a welcome cup of mint tea with local honey and ate our lunch as we tried to digest what we had seen of the garden. We know there are so many other systems happening but that's another time.

Thanks Pam and Peter for your generous hospitality and unbridled enthusiasm for research in self-sufficiency and maximising health with an Organic Lifestyle.

Karyn Ennor



Gardening Tips! Contributed by club members

Save your seeds for next season. Propagating your own plants from seed is very rewarding and with a little care, anyone can learn how to grow plants successfully by this method. Seeds can be easily collected, stored and swapped between gardeners and regions. When collecting seeds, save them from your best plants; vigorous, healthy plants that exhibit the characteristics you would like to see reproduced in the seed-grown offspring. The larger and harder the seed, the greater its potential lifespan. (Kay De Gunst)

A little bit of trivia I put a Nasturtium stem in a vase and it sprouted roots. I did not think Nasturtiums would grow like that. (Maureen Schmitt)

Keep a Garden Journal where you can record which crops did best and at what time of the year they were planted. (Kay De Gunst)

Did you see the article on our club member Lenzie Duffy in Bundaberg Now? Follow the link [here](https://www.bundabergnow.com/story/lenzies-garden/) <https://www.bundabergnow.com/story/lenzies-garden/>

This is a brief Introduction to Pruning

Author Malcolm Fuller

The benefits of pruning are:

- To increase light penetration
- Reducing Rub
- Convenience of picking
- Stop bi-annual fruiting

Pruning reduces wood in the tree so it doesn't use too much energy in maintaining and diverts it into fruit.

This also helps stop over cropping, which often causes the tree to go bi-annual.

Pruning can also help manipulate crop timing.

Page |
9

Timing:

In general, the best time to prune is Either Side of the Shortest Day. The reason for this timing:

- The shortest amount of day light.
- Cool.
- The tree is dormant or semi dormant.

I avoid summer pruning due to the risk of Sunburn to the limbs.

The tree can be pushed into survival mode and forced to regrow quickly using up carbohydrates that should be used for fruit production.

This allows the tree to regrow slowly after being pruned.

How To Read Latin Plant Names



Begonia maculata describes the Polka-Dot Begonia perfectly. (From Latin, *maculata* can be translated as spotted.)

Reference: <https://smartgardenguide.com/latin-plant-names/>

Binomial nomenclature looks (and sounds) more complicated than it actually is. The naming convention conveys information about a plant clearly and concisely.

Note that botanical Latin is not strictly classical. Non-Latin terms can be used, but they are Latinized for consistency. For example, American plants may be descriptively named *americanum*.

All plants are assigned two names: the genus and the species. Each name is unique within the Plantae (plant) kingdom. This two-termed name is called a binomen, and it should always be written in *italics*.

Genus

The first term of the binomen depicts the plant's genus; it is called the generic epithet (an adjective or phrase expressing a quality or attribute regarded as characteristic of the person or thing mentioned). The **first letter** is **capitalised**. The genus may be abbreviated to only this letter if it is understood by the reader.

The generic epithet describes the genus a plant belongs to. Plants in the same genus share characteristics and have a common ancestor.

Knowing the genus offers basic information about the individual needs of a plant. This may include the plant's preferred soil, nutrition, and moisture levels, the temperature and humidity they thrive in, and even disease and pest resistance.

Species

The second word of the binomen is the specific epithet, or species. This classification differentiates the plant from other members of its genus.

The benefits of Green Manuring

Green manure crops have traditionally been used as part of crop rotation cycles within vegetable and market gardens. Use green manure crops in annual garden beds; the crops will flourish and choke out weeds that would otherwise present an unwelcome maintenance task.

Plant a green manure crop to break up and enrich poor soil prior to planting.

Set aside an area of garden specifically to grow a green manure crop for composting.

You will always have a supply of high nitrogen material to cut and add to your heap or tumbler.

Some green manure for the warmer months are: -

* Cow Pea (legume)

* Mung Bean (legume)

* Lab Lab bean (legume)

NOTICES

- If anyone has a wild climbing pink, red or yellow rose plant, we would love some cuttings please. Mike Apap
- Grass Roots magazines - I have 20 + older issues if someone would like to read. See Trevor at the next meeting.
- Daniel and Cathy Critchlow have a 1000L Pod that has been cut in half to give away. Can possibly deliver it if needed, located Bundaberg East.
- From Jen & Johnny - Urban Kulture runs online events to learn to grow your own mushrooms. It costs \$120 for the day (or \$110 early bird). People will make their own kits of growing mushrooms (we are doing oyster and reishi mushrooms at the moment) as well as lots of online materials about how to grow any kind of mushrooms in linked workshops and support. The link is here:

<https://www.urbankulture.com.au/event-details/bundaberg-ultimate-fungal-wizardry-october-23rd>

Support the club by purchasing some products from our shop which is always open on meeting nights, or pick up can be arranged at other times.

Deadline for November Newsletter

Please send through information to the editor by the second Friday of each month.

We would love FEEDBACK from club members on anything and everything.

Tell us about your success and your failures in the garden and help others learn along the way.

Let us know about community events or what's up and coming in the area.

To include notices and details of Club activities email: newsletter.bundyorgard@gmail.com

Or Phone Cathy 0403 430 969

BOGI SHOP

Products available are:

- Liquid Lime
- Liquid Kelp
- Liquid Fish
- Mineral Granules
- Microlife
- Organibor and
- Katex Organic Super Growth.

They are available for sale at our meetings, but please contact Bruce McKay on 41544405 for collection from his address in Walkervale.

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