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Multi Species Farming for Beginners



The 5 principles to manage for landscape, nature and profit



Clint’s Farm. Grazing cattle after 2 passes of the SOILKEE Renovator. Northern Rivers, NSW, Australia.

About Me...

TAMZIN REVELL
FOUNDER OF
FARMING REVOLUTION &
MS FARMING



I am a self taught videographer and editor. The content I create has always been about giving you, the viewer, the best chance to understand multi species farming and have a go at it for yourself.

Farming Revolution has a YouTube channel dedicated to regenerative techniques. There are a couple of “film stars” who have their own playlists and I thoroughly enjoy their company whilst filming and storytelling.

I am affectionately known as ‘the interrogator’ because I ask a lot of questions whilst on-farm.

I have spent thousands of hours listening and editing and feel there is a niche for a *‘Beginners Guide to Multi Species Farming’* using the multi species (ms) technique. There is also a blog website dedicated to telling farmer’s stories (case studies) using ms farming throughout the differing Australian landscapes.

This ebook is designed for you to browse and become serious about taking the first step to regenerating your life.

Remember to join the Farming Revolution YouTube Membership dedicated to giving you support, information and a greater understanding to make your life PROFITABLE.

Learn more about the principles behind making a profit whilst regenerating your life and farm using multi species (ms) farming as your technique.

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My chickens at home helping me spread my worm compost. Gold Coast, Qld, Australia.

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Chris Eggert’s Dairy Farm.
Temporary grazing fence-line before and after grazing.
Mid North Coast, NSW, Australia

Why is Multi Species Farming important?

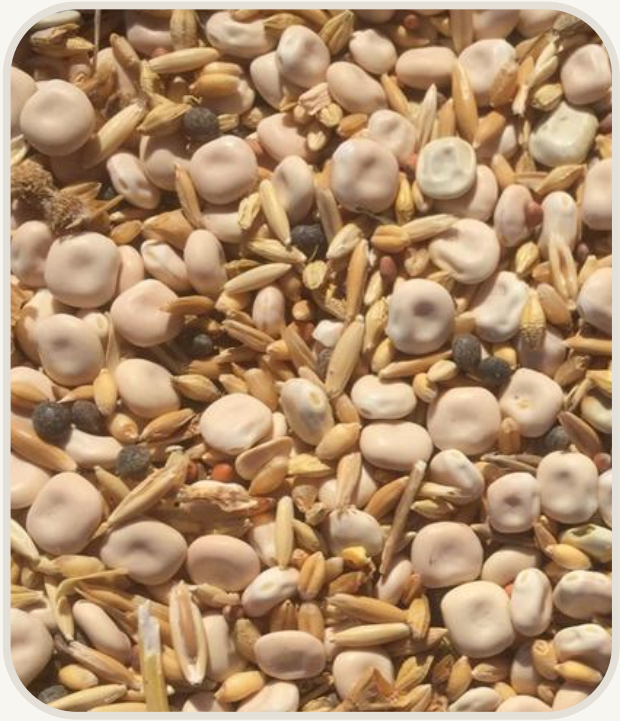


Also known as “regenerative farming” it literally means, ‘to make something better or to improve’ AND it is a never-ending practice. There is no such thing as *regenerated*. The best way to look at this is to understand that regeneration has an outcome; it is for us to become ***sustainable*** once more. We have run the systems and cycles down to such a degree that it is impossible to continue in this downward spiral. We are on the verge of collapse. In my humble opinion, I believe regeneration is an honourable word and in Farming Revolution’s vocabulary it is used alongside multi species (ms) farming where the big D (DIVERSITY) is extremely important.

When you look around, what do you see?

I see broken systems across the board especially our health as more and more money is being spent on synthetic drugs and yet we seem to be getting sicker. How many people are 100% fighting fit? Not many, right?

Let’s go back in history... where have farmers sat on the economic scale? Second from the bottom would you say? Weren’t farmers called ‘peasants’ in the days of old? Why was that? Is it because those of us who are in control of feeding our communities have the power to turn things on and off? The unharnessed power of farmers is extreme and it is time to step up and take control of our destiny.



- How important are you?
- How important are you as a farmer?
- Where do you see yourself in 5-10 years time?

Place yourselves at the TOP **with a Farming Revolution**



Darren Mudford’s Farm. 4 way ms cash crop.
Daikon Radish, Lupins, Wheat & Vetch
Central NSW, Australia

Why is *regeneration* so important?

This is where you need to understand the whole. Regenerating our lives is about, *resetting* what we know to be absolute. It's about letting go of the old and forging forward into the slightly unknown where the pioneers have been living for a few decades now.
None of this can happen if you are sat in the old system. New ideas and principles need to be put into action. The old system is almost completely dead. So don't die with it, swim to the surface, take a deep lungful of clean air and focus on what you can do and don't even think about what you can't.
Understand your capabilities. Are you able to do the things you want or should you let the younger generation take the reins? Communicate with language you all understand, saying the same thing over and over won't work. Change the way you explain something, use analogies, express yourself clearly and lead by example.
Our land is a reflection of ourselves. If we are physically sick and suffocating under debt, have a look across your property and she will be feeling the same. Soil that is tight and unable to breathe, dehydrated, lacking an immune system because of a reliance on synthetics. A diminished functioning ecosystem and lack of biodiversity.

Where do I start?

Is the overwhelm too much and getting in the way of rational thinking?
Start with your routine first. Is your life enjoyable? What time are you getting up? How are you feeling at that time? What are you having for breakfast and is it enough to fill you for the rest of the day? Are you fasting?
Then focus on what you are giving your land to eat? Does it reflect your life and the way you are treating yourself?
Changes may need to be made, but go slow. As you know the tortoise wins the race and has a chance to evaluate his/her mistakes.
You are your own destiny and this is why you are so important.
This is why multi species farming is so important.



You are the reason Farming Revolution exists!



Darren Mudford’s Farm.
4 way ms cash crop, Daikon Radish in flower.
Central NSW, Australia

The Top 5 Principles

INCREASE BIODIVERSIY

Diversity creates more diversity. Change starts when a variety of plant species are sown. Diversity above and below the ground increases micro organisms, insect and bird populations. This stimulates a healthier ecosystem that keeps the pests in balance preventing swarms of destruction.



REDUCE SOIL DISTURBANCE

Soil is a living substrate. It farms many organisms that enable the uptake of nutrients into the plants. Disturbing this takes a toll on the ability for the soil to function, destroying the aggregation (air spaces) literally suffocates the life below the surface and breaks the fungal hyphae.

KEEP GROUND COVERED

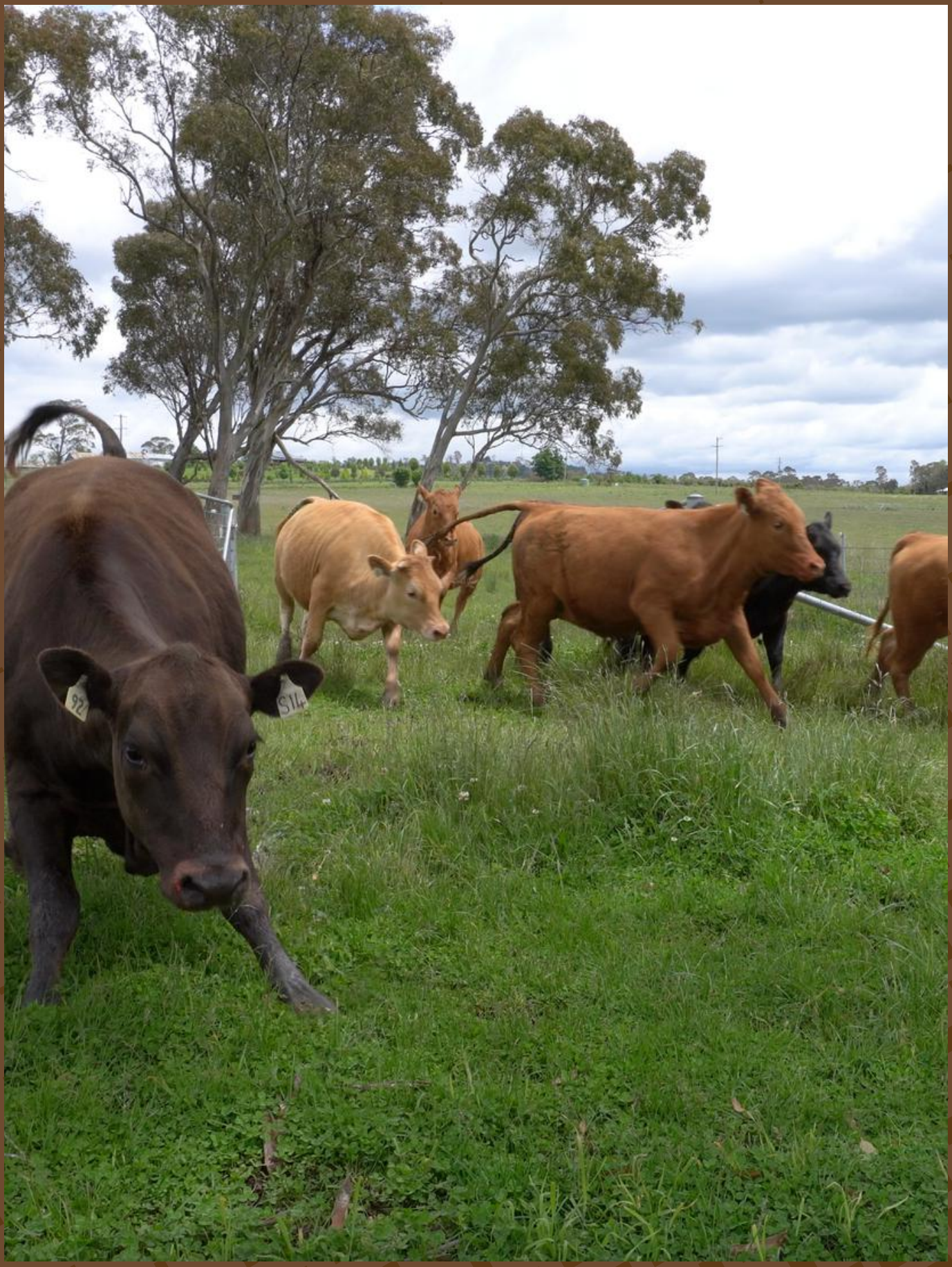
Growing diversity to keep the surface covered creates it's own microclimate. This keeps the soil surface significantly cooler than bare ground. It captures dew all year round and keeps the moisture from evaporating. This helps to keep the soil alive.

INCREASE LANDSCAPE FUNCTION

A healthy landscape is one that absorbs the total amount of rainfall no matter how heavy it falls. The water cycles should be fully activated so the land literally sucks water in like a sponge. This means soil carbon must be present as Soil Organic Matter (Humus).

INCREASE ALL CYCLES

Water cycles need carbon, carbon needs a living soil with photosynthesising plants, plants need biology to uptake nutrients, nitrogen comes from the air via the nitrogen fixing plants, increasing the root surface area comes from mycorrizal fungi promoted by fungal dominated plants. Worms, insects and organisms cycle nutrients and aerate the soil.



Richard Makim’s Farm. Moving cattle using timed rotational grazing technique. Northern Tablelands, NSW, Australia

Increase Diversity



PLANTS FOR GRAZING

Grazing can have a seriously good impact on increasing the diversity purely with timed rotational grazing and managing the seasonal differences. Over-sowing a multi species boosts the soil condition and helps to fatten the livestock too. Using both these techniques will hyperdrive regeneration especially below the surface (microbes).

PLANTS FOR CROPPING

Choose the species that likes to grow in your soil and context. If you are planting a multi species solely for ground cover then you need to know how to terminate the crop for your next crop. If you are planting a ms cash crop then figure out the size of the seeds. They need to be different sizes so that seed grading can happen easily. At any stage in this process livestock can graze the crop. Sorghum loves being grazed and it doubles its root ball, therefore increasing its yield.

TREES FOR SHELTER AND INSECTS

Trees offer shelter against erosion and for livestock to rest under. Trees are an excellent habitat for many different insects. They also lift the deeper water table and the areas around the trees tend to be more fungal where grass thrives. Shelter belts where hedges once were are a great idea. Giving 25% of your land back to nature boosts the production of the remaining 75%.

DIFFERENT ANIMAL SPECIES

Land can be regenerated without animals but it is definitely easier with several different species of animals. They are walking fertilisers that take up living plants and exchange this into a moist, microbial rich fertiliser that feeds insects and micro organisms. Travelling chicken caravans that follow the mob of grazing sheep or cattle has shown to be incredibly beneficial and profitable.



Russell Young’s Farm. Disc seeder for planting.
Western Downs, Qld, Australia

Minimise Soil Disturbance

NO TILL OR ZERO TILL

What I have learnt over the years; it is your decision whether you plough/till or not. These principles are not hard and fast rules, they are a guide. However, to keep the fungal population at an optimal level, the soil needs minimal disturbance. Consider all of your options before reaching for the deep ripper and always make sure you have a crop to sow straight into that soil. If you have a deep pan that needs cracking then make sure living roots are following straight behind to keep those cracks open. When your soil becomes too fungal dominated then a disturbance is a good idea to break up the hyphae this resets the ratio of bacteria and fungi.

BACTERIA VERSUS FUNGI

What are you wanting to grow? Brassicas love a more bacterial dominated soil but this doesn't mean to say that sunflowers or oats in your mix should be forgotten about just because they are mycorrhizal promotors. Sowing a multi species will trigger a sense of health and vigour. Listening to the buzz of pollinators will give you the reassurance you need. Dig a shovel of soil and have a look. You will be pleasantly surprised how nature bounces back.



OTHER WAYS TO RESET

If weeds are the reason for ploughing/tilling there are other options to reset for the next crop and I don't mean reach for the spray rig. We will be discussing this on the YouTube channel so join us for the live conversations.



Family Farm rotational grazing example. Notice how much ground cover there is after a 2 day graze. South Western Slopes, NSW, Australia.

Keep The Ground Covered



Never leave bare fallow. *This is hard to hear but that is the truth*. What about the water saving situation? From the folks I have spoken to, the repeated message they give, is that the paddocks that were covered have protected the soil and microbes, therefore the following crop has bounced back better and quicker, even after a dry spell (drought).

Definition of a weed.... A job specific plant, given to you free of charge by Mother Nature.

SO TAKE ADVANTAGE OF THESE HELPFUL PLANTS

PASTURE

This is the easiest way to keep the ground covered as long as grazing management is used in conjunction with ms farming. Animals graze selectively this can effect your diversity of species of plants over a period of time. To speed up the process, over-sowing into pasture is a boost but not always necessary. Your animals will tell you if they need more diversity. Watch how they graze. What do they reach for first?

CROPPING

A multi species cash crop is achievable. Are you growing for *grain or seed?* There are so many options to choose from. A ms crop can also be used in a feedlot, dairy fodder or for over-sowing into pasture (broadcasting). If separating grain or growing for seed then you will need to use a seed grader to grade and clean your product. Growing different sized seeds/grains is imperative in this situation.



Martin Royd's Farm, Jillamatong,
Natural Sequence Farming in action.
Southern Tablelands, NSW, Australia

Increase Landscape Function



Have a look at the lay of your land. Are you capturing every mm of rain that falls or do you often experience runoff?
Everything that happens on your property needs to be encouraged to stay in place. Fertility is extremely important but runs away downhill if the landscape is not functioning appropriately. Runoff takes your capital and that is money literally running down the drain or onto your neighbours property.

WATER CARRYING CAPACITY

Do you know what is under you feet? Is it porous or not? How deep is the top layer and sub layers? Is there a hardpan?

INFILTRATION ABILITY

Does your soil have the ability to breathe? Are there aggregates that allow for air space? Is there an abundant amount of humus? Are you increasing your soil carbon levels?

SLOWING DOWN THE RUNOFF

During the soil improving era it is necessary to slow down the runoff. This is to keep fertility on your property and stop erosion. Water spreading banks, keyline and ponds are good ways to help capture your capital and keep it on your land. The slow seepage eventually hydrates the landscape and increases production and profitability.





Russell Young's Farm. Harvesting Sugar Drip Sorghum from a ms crop.
Western Downs, Qld, Australia.

Restore the Cycles

WATER CYCLE

All life needs a clean water supply, soil, plants, trees and animals. Water needs to be aerated to stay healthy. There are mini, small and large water cycles. These are created by photosynthesising plants that stimulate micro climates under leaf canopies. This keeps the moisture in and stops the reradiation of heat and evaporation, a direct consequence of bare ground.



OXYGEN CYCLE

During the day oxygen is released by green plants when they photosynthesise, but at night they also need oxygen just like animals and humans. The soil needs a good amount of oxygen (to stay aerobic) otherwise the microbes and insects die. Tight soil is lacking air spaces and will become anaerobic especially when rain falls, this inhibits plant growth.

CARBON CYCLE

This mineral is essential to every living thing on planet Earth. The 4 step process for plants to take C from the atmosphere and push it deep into the soil is: Photosynthesis, Resynthesis, Exudation and Humification. The final step is where stable organic carbon in the form of humus can be pushed into the soil as far down as the length of the roots. Once in the soil C acts as a sponge and increases infiltration rates of rainfall, helping to prevent floods.

NITROGEN CYCLE

Nitrogen forms 78% of air. It is a major component of chlorophyll, the green pigment that enables plants to photosynthesise. Leguminous plants with N fixing bacteria convert atmospheric N into available N in the soil

SULPHUR CYCLE

Sulphur is vital for protein synthesis, chlorophyll and seed production, drought and disease resistance and crop maturation. It can be absorbed through the leaf or the roots in the form of sulphate. It is an essential macronutrient.

PHOSPHOROUS CYCLE

This mineral plays a central role in the transfer of energy within organisms, is present in genetic material and is a component of cell membranes therefore it has a direct impact on the plant growth rate. Buckwheat is a P scavenger and is essential in ms farming.

MICRO-BIOLOGICAL CYCLE

It takes a huge workforce of living micro-organisms to maintain healthy plants. By using pesticides especially fungicides these communities are wiped out. The biological aspect of ms farming creates a healthy environment for all living creatures and plants. Biology is essential.



Neils Olsen’s Farm with Ray Archuleta,
watching the SOILKEE Renovator in action.
South Victoria, Australia

Strategy...

→ PROFIT

To be sustainable means you need to be financially profitable. Profit also comes in other forms; time, health, people (relationships) and the synergy of all four of these. Regenerating your life and land also means regenerating your bank account too. Living with debt is crippling.

→ DIVERSITY

Nature shows us how she likes to be and a monoculture is never on the menu. Diversity is the core of multi species farming. Diversity above the ground means a diversity of micro organisms below the surface. Farming with diversity in mind means taking a different approach and often stepping outside your comfort zone. Another form of diversity is enterprise stacking, diversify your business model.

→ GRAZING MANAGEMENT

There are several concepts when managing grazing. Are you rotating paddocks? Altering the amount of time to rest and graze? Changing the number of head? Using seasonal growth and annual rainfall differences? Do you have a variety of animals in the mix. Are you trading or breeding, producing meat, eggs or milk?

→ MULTI SPECIES CROPPING

Ground cover or cash crop? There are so many questions to ask before you go out and buy a multi species mix. Why are you growing them? Are you able to harvest twice a year? Do you have a grazing opportunity, is it for soil conditioning or do you want to harvest and grade a cash crop? Can you graze and harvest the same crop? MS farming gives you so many options, all you have to do is manage for those options and take full advantage of the opportunities that present themselves.



Darren Mudford's Farm.
Martin's 4 way seed grader. Central NSW, Australia.

How to shift from your ‘norm’



Ask yourself these questions:

Why am I going to start this process?

What ideas do I have for my farm _in my context?_

Do I have any morale support _in my area?_

What is the _first step_ I am going to take and why?

Do I have the _right_ equipment and machinery to start?

Start small and do not break the bank by spending too much, on lots of things, that you probably don’t need at the beginning. The biggest mistake people make is to buy a 14 way mix that is expensive, only to find that half the species don’t germinate.
Remember your land will need stimulating, it’s like pulling you off the sofa and telling you to run a marathon! It’s not going to happen so easily. Step by step is the key to survival and eventually prosperity.

OBSERVE WHAT YOUR LAND IS TELLING YOU BEFORE YOU START.

What weeds are wanting to grow? What are they telling you? What colour flowers do they have? Do they have a ferocious tap root or long tendril type roots? Which birds eat the berries or which insects are drinking the nectar and pollinating these weeds? Are they beneficial insects?

Once you understand what Mother Nature is doing, you soon realise there is a purpose for everything on your farm. Things that have ‘got in your way’ will now be a tool for you to understand. Have you room to plant an area for the wildlife and “weeds”? Believe it or not, 25% of your property planted back to natives improves the productivity of your land (75%) that you farm.



A beneficial Christmas Beetle at home on a flowering Lemon Myrtle. Gold Coast, Qld, Australia.

Would you like more insights like this?

Join the Farming Revolution YouTube Membership

If you have enjoyed this ebook and would like to continue learning please 'become a member' by clicking here or on the channel below...
This will take you to the Farming Revolution YouTube channel where you need to click on the membership button.

Join us for live conversations

Access to this membership means you will have the ability to ask questions directly with the speaker of the month. Plus there will be a new video each month specifically show-casing multi species farming, either pasture, cropping or both. Plus easy access to all the previously uploaded videos. It's a win - win situation.

