

# NORTHERN TERRITORY SOIL SYMPOSIUM

Building land manager capacity and  
knowledge in soil health and conservation

## Alan Petersen

Co owner Rum Jungle Organics



# Rum Jungle Organics

Farmers of the light! Dr Christine Jones

**Capturing  
biomass**



**Harnessing  
photosynthesis**

# Third Paradigm Farming- a shift in thinking and practice

## Paradigm One Feed My Family

Subsistence farming characterized by traditional practices, spiritual and cultural beliefs, intensive labour, small holdings, low income, self-reliant and circular.



## Paradigm Two Feed the World

Industrialized farming characterized by intensive production facilities, expensive inputs, large scale, big dollars and a disconnection to food, consumers and nutrition. Is extractive and linear and a major contributor to carbon loss and climate change.



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# The Great Turning- a shift in thinking and practice

## 3. Paradigm Three Resilient Agriculture

A small holder -based network of farms that are resilient, regenerative and ecologically literate.

Characterized by-

Practices that build soils

A respecting of resource conservation, innovation and technology

Regenerative practices that mimic nature, mitigate climate change and preserve natural resources including soil organic carbon

An interconnected network of producers and consumers



# One step further than organics- Regenerative Farming

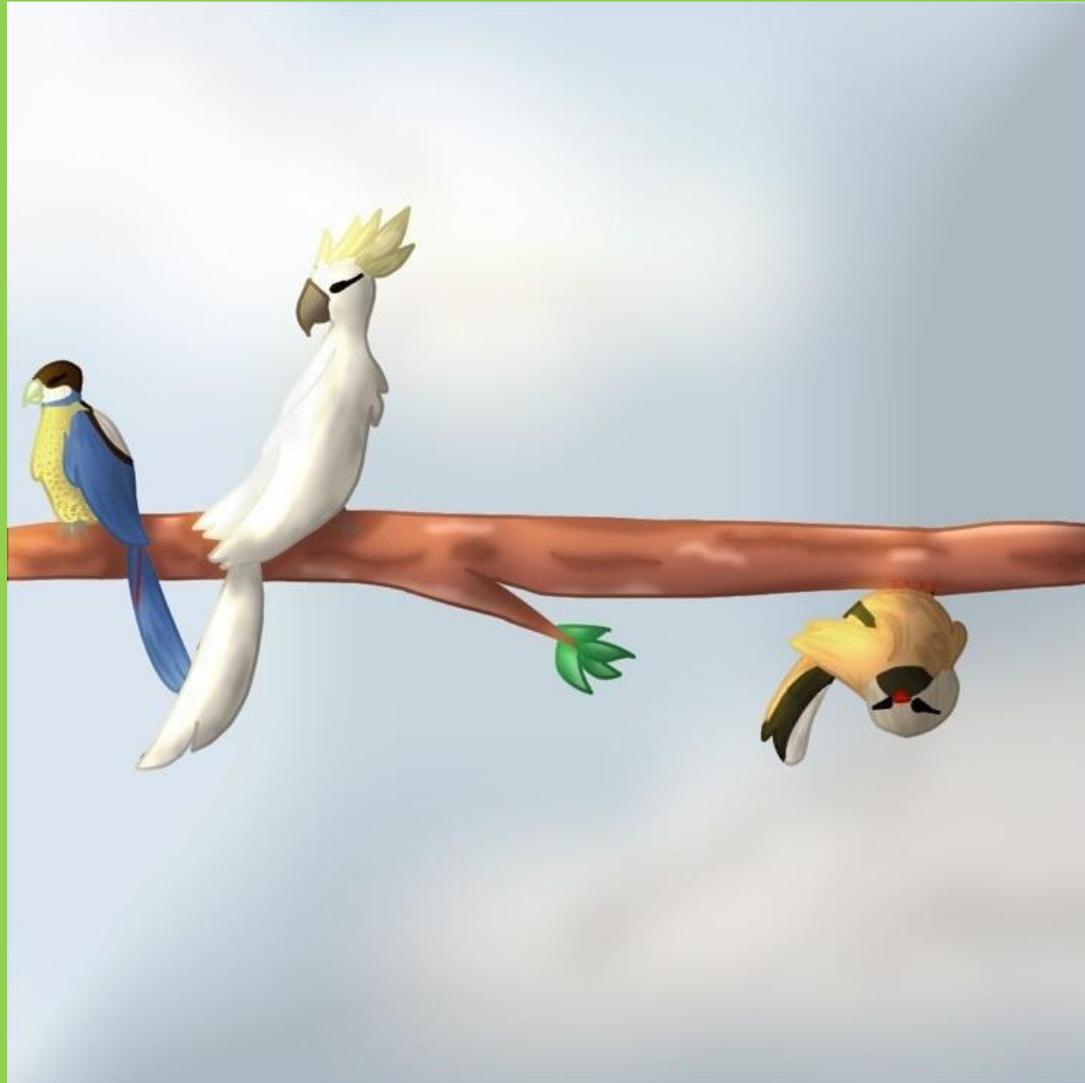
- ‘Regenerative organic agriculture goes beyond sustainable and prioritizes soil health while simultaneously encompassing high standards for animal welfare and worker fairness.’ Robert Rodale, 1989
- Regenerative organic farming is a conservation and rehabilitation approach.



# The regenerative organic toolbox



# Some see things differently



Drawing Alexi Hull, 2021

Look at the problem before you look for a solution  
Changing how you view “weeds”



# Benefits to soils of living plants

- Biodiversity
- Soils structures
- Hydration- capillary action
- Carbon sequestration and SOC building
- Habitats
- Micro biome
- Soil resiliency
- Shade, cool and moist
- Nutrients bioavailable

# Think Plant Biodiversity not Weeds. No problem!

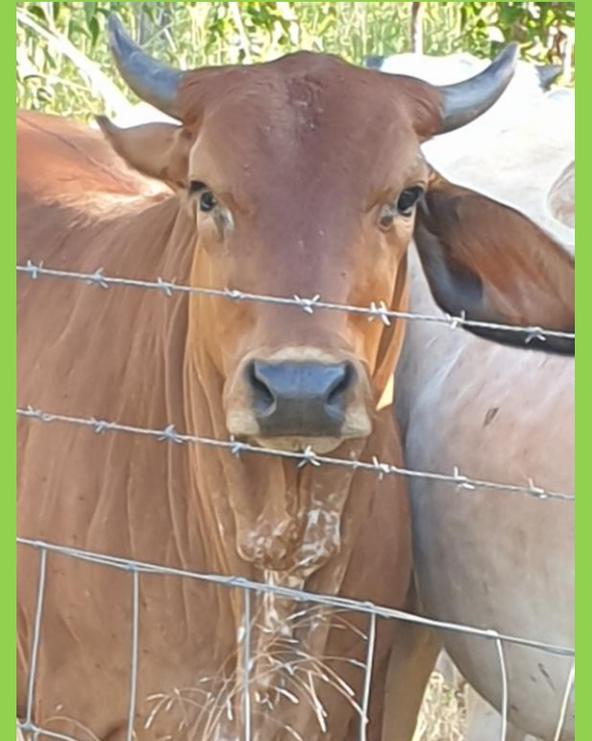


# The Third Paradigm-Farmers of the Light!

- Look at things differently

Sometimes when you look at a problem in a different way it is no longer a problem!

Take one thing from the Toolbox and trial it.



## Relearning Our Place on Earth

“We cannot solve problems by using the same kind of thinking  
we used when we created them”  
Einstein

Change how we look at the earth

Support of governments and policy  
makers and legislators



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## Simon Mattsson

Regen Ag Educator/  
Consultant SOIL LAND FOOD

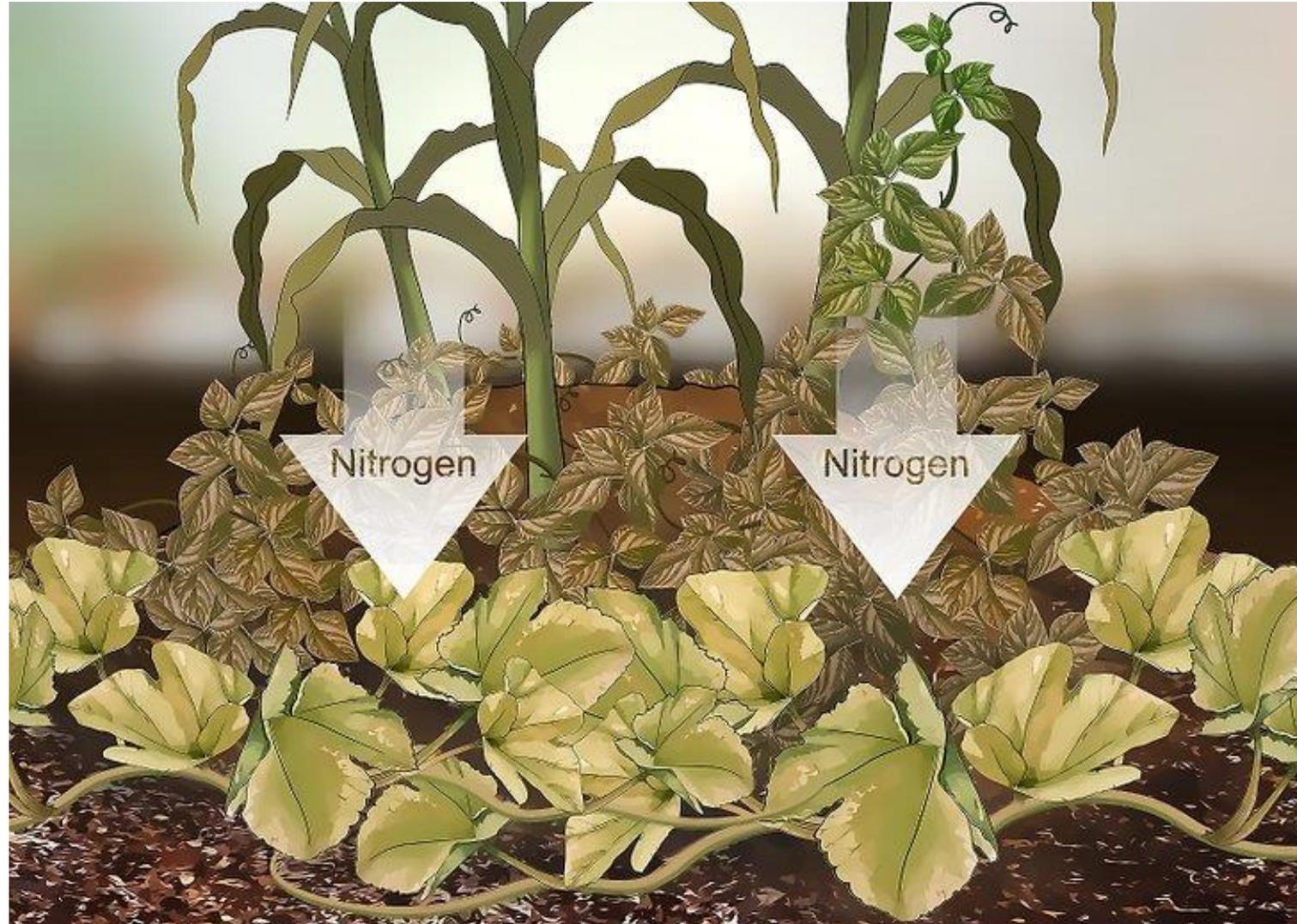


# Polyculture

## Modernising an Ancient Idea

The Three Sisters

Sometimes including a fourth sister for pollination



Corn Beans  
Squash

Sunflower

# CARBON THE KEY



# SAME FIELD NO HERBICIDE



Regenerative Agriculture in the UK.  
Multi species cover crops and grazing. Andy Howard, Ashford in Kent,  
southern England



Late summer cover crop being grazed over winter, six feet per day, weed control strategy, couch and black grass. Tim May, Reading, central England



# My Journey Monoculture to Polyculture









Planting multi species inter crop into 25tph cane thrash



# Terminating sunflowers in plant cane November 2016



	Free-living nematodes/200 g soil		
	1 month	3 months	7 months
Nil	705 c	1333 bc	966 bc
4-species mix	3836 a	4111 a	1083 bc
8-species mix	4559 a	4045 a	1499 bc

Interaction table showing the effects of treatment (intercropping with multi-species mixes)

	Nematodes/200 g soil					
	Root-lesion	Root-knot	Spiral	Stunt	Stubby	Dagger
Nil	189 a	5 a	58 a	14 a	29 a	1 b
4-species mix	86 b	34 a	56 a	4 a	63 a	8 a
8-species mix	116 ab	12 a	19 b	3 a	39 a	5 ab

Effects of growing multi-species mixes as an intercrop for three successive years on populations of plant-parasitic nematodes

# Food for thought

- A couple of worthy quotes for you
- The difficulty lies not so much in developing new ideas as in escaping from old ones. - John Maynard Keynes
- Ralph Waldo Emerson said,
- As to methods, there may be a million and then some, but the principles are few. The man who grasps the principles can successfully select his own method