

Multispecies Pastures

Species and establishment
Southern Victoria

Jade Killoran, Healthy Farming Systems



Creating functional diversity

1. Grasses – Poaceae family
2. Legumes – Fabaceae family
3. Non leguminous forbs

6-12 species

Annuals then perennials



Project Results: 2019-2025

- **Multispecies add value**
- Similar quality, similar/better production
- Grazing flexibility – comp growth curves
- Groundcover
- Increase in photosynthetic potential
- Increase in biological activity
- Soil structure/nutrient cycling/stress resilience
- Sustained yields under reduced inputs (25% min)
- Self organizing, profitable system



	Grasses	Legumes	Non legume forbs
Annual	Ryegrass Autumn cereals Millet Sorghum Corn	Annual clovers Vetch Field pea Faba beans	Tillage radish Fodder rape Turnip Linseed Buckwheat Sunflower
Perennial	Ryegrass Cocksfoot Phalaris Fescue	Red clover White clover Lucerne	Chicory Plantain

Establishment is Crucial

Usually, **STRATEGIC** chemical or cultivation is needed to disrupt the status quo

Intervention level can and should be reduced over time

CHEMICAL: If soils are light/fragile and paddock is level and smooth

CULTIVATION:

Heavier soil types

Seedbed formation

Alleviation of compaction/anaerobic conditions

Incorporation of inputs such as lime/gypsum

Heytesbury DLN Projects

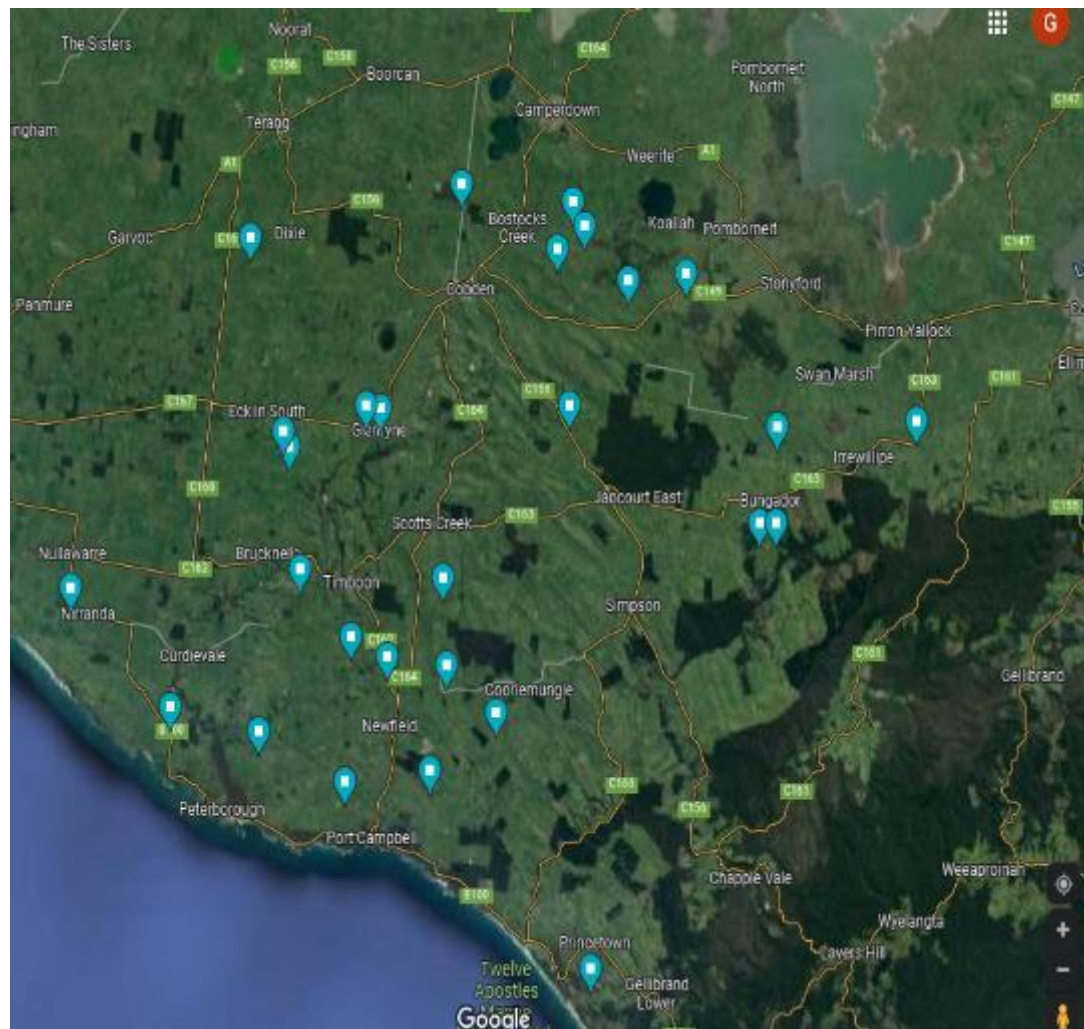
2020-2023

Majority chose multispecies

Paddock scale plots

Doubling of summer/autumn fodder

Machinery assessment



Nov/Dec 2020 – Feb 2021

Disc drill



SoilKee



Rotor Strip Till
1.3t/ha DM



Powerharrow
2.4 t/ha DM



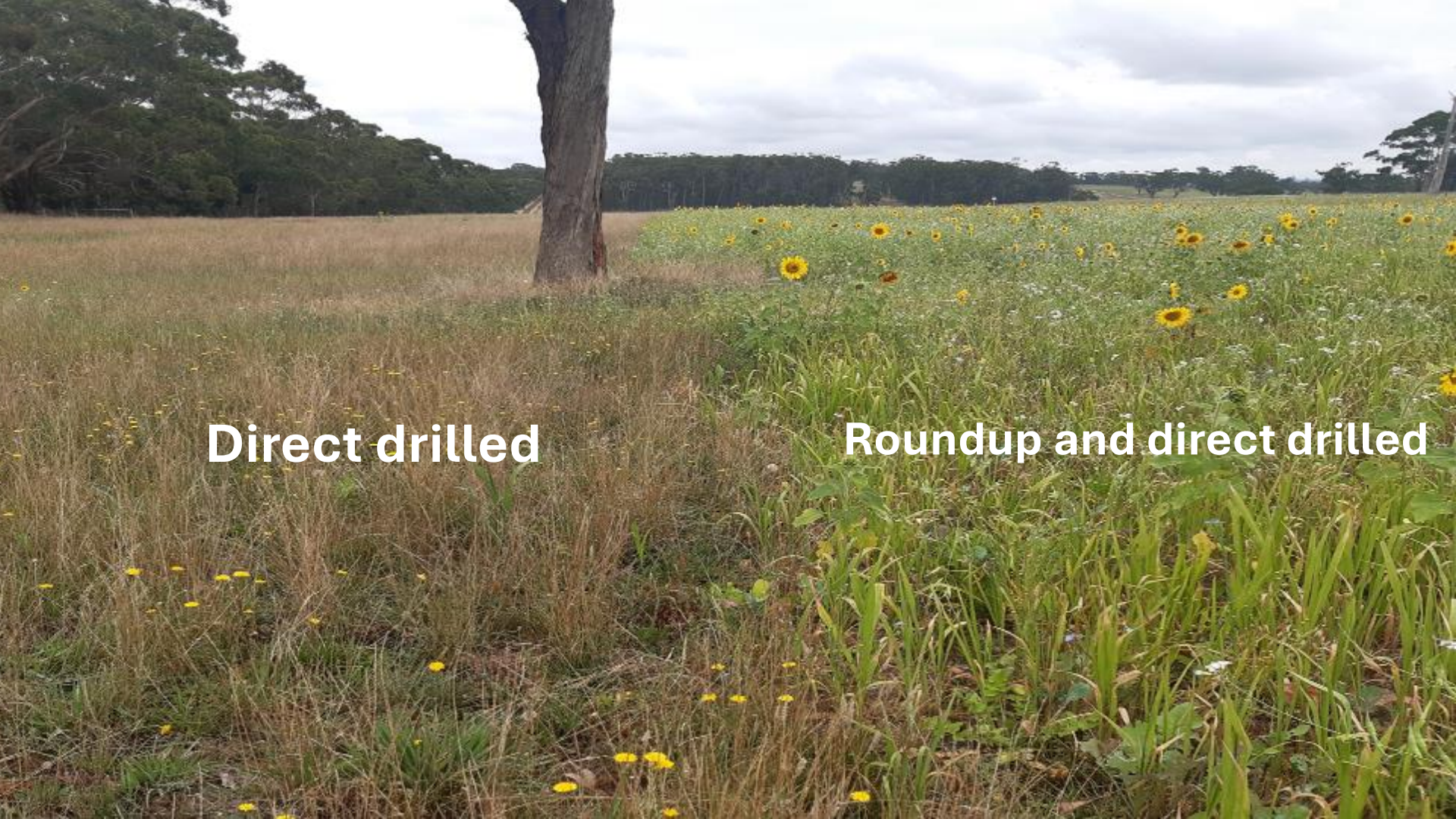


CULTIVATION GUIDE

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A guide to improve the chance of success of sowing a multispecies pasture		Rating	Your Score
1. Time of Sowing			
Autumn Sowing		2	
Spring Sowing		4	
2. Previous Paddock Preparation (within 12 months)			
Low or no cultivation/no chemical control		8	
Power Harrow		5	
Offset Disc		4	
Mouldboard plough		2	
Pre sowing herbicide (reduces need for cultivation)		0	
3. Previous pasture or crop (within last 6 months)			
Successful Annual Crop		0	
Successful Annual Multispecies		2	
Weedy annual crop/pasture		4	
Competitive perennial pasture base		6	
4. Soil Type			
Light Soil		2	
Medium Soil		4	
Heavy Soil		6	
Total Score			

Recommended Cultivation Level	Examples	Score	
Aggressive/heavy cultivation	eg. Powerharrow, offset disc, rotor strip till*	16 +	
Medium level cultivation	eg. Speed discs, tyne drill	10-16	
Minimal cultivation	eg. Disc drill, SoilKee*	1-10	



Direct drilled

Roundup and direct drilled

Transitioning to perennials

- Production
- Visual assessment of soil/pasture
- Soil and plant testing
- Sustained reduced inputs
- Germination of desirable species
- Transition could take 1-4 years
- Static perennial mixes aren't optimal
- Strip till machine or disc drill to maintain mixes



Take Homes

Establishment is crucial

Multispecies complement traditional pastures

Stabilise fodder curve

Improve soil health and function

Improve system health/resilience

Reduce inputs

Should be a dynamic system for best benefit

Improve profitability/sustainability/biodiversity

