

LAKE CHARM FIELD DAY NOTES

Regional Landcare Facilitator: Ashley Bevan.

Powerpoint presentation of RLF role assisting funding applications etc., supporting farmers and land managers to promote sustainable farming practices and support regional communities to protect the natural environment. Project activities include workshops, field days, training courses and field guides. There are 160 Landcare and Community NRM networks in North Central Victoria.

CMA: Joel Spry. Outlined results of last survey as feedback to the audience on most popular topics they would like to know more about.

STIPA: Graham Hand

Native grasses feed with associations with fungi – need active decomposition by fungal hyphae (looks like a grey / white root mat in the soil).

Not all areas should have trees. People need to understand.

Need to grow litter on the soil surface. Graze when there is litter which creates nutrient cycling – pulsing.

Need to use other plants – even weeds. This will create a bed for native pasture. Learn how to use animals to create a diverse pasture. Need 70 native pasture species??

Good pastures have @ 5% legumes. Too many legumes will leach excessive nitrate and acidify the soil.

If underuse a pasture, it tends to go to woody plants eg. Blackberry, Rolley Polley. If not utilised / grazed enough there will be grey and oxidising perennial grasses. If this happens carbon will be lost to the atmosphere and you will not be nutrient recycling, therefore need to graze.

May be able to use roads etc. on farm not heavily grazed to use as a comparison.

The better perennial grasses have a softer seed that is designed to germinate in a compost bed. Hard seeds need bare ground and these are present on many weeds.

Need to manage the soil surface / interface;

- Biological monitoring
- Monitor soil surface
- Ground cover
- Composting litter
- Distance to nearest perennial
- Photo's down and across

“Don't eat the weed, let it seed” – trial area. Grow perennials over time to outcompete them.

The saying Production = profit. Not necessarily true. It depends on input costs.

Struggle to hold introduced perennial grasses for 10-15 years. Maybe at Hamilton, not here.

Q: Can you claim carbon with perennial grasses? A: methodology not out yet.

Q: If a farm has not had native perennials for 50-80 years will there still be viable seed? A: perennial grass seeds last a long time. They can spread from fence lines, animals etc. Sometimes people ask where do the perennials come from? - Graham usually says – where do the weeds come from? Don't always know, but they appear.

ENRICH PROJECT, Forage shrubs, Jason Emms, South Australian Research and Development Institute and Future Farm Industries CRC.

44% of annual rainfall occurs in Oct-Mar. Rainfall utilisation most suited to perennial grasses rather than annual medics etc.

Shrubs fill the feed gap. Can be used at critical times when perennials are seeding (shrubs grazed immediately after break of season).

NRM benefits – resilience to climatic events. Long periods of dry.

Increase diversity of shrub species. Larger grazing systems of forages. Animals / herbivores need diversity. Need to balance the diet - animals just don't want lucerne etc.

@120 species of native woody plants are palatable in Australia. Some varieties exhibit bioactivity which impacts on fermentation and reduces methane production. Research is looking at whether some varieties reduce the incidence of worms etc.

Some saltbush varieties prefer light soils and some suited to heavy. OMSB OK on all types of soil.

A lot of species of forage shrubs had superior digestibility with higher energy content than OMSB. Shrubs have higher mineral content due to deep roots accessing minerals and nutrients.

Some forage shrub species have superior digestibility over oats etc. 40% of species trialled showed toxicity to worms. 15 species reduced methane concentration. No silver bullet even though a range of species are exciting and have potential, there is difference within a species and between species in palatability.

Trying to come up with strategies for selective grazing. Trials measured preference with increased exposure time of sheep. There was a preference for one species in the first two days of grazing, then sheep went to other species. Everything got eaten down to complete defoliation after 4th exposure. Over time the animals learn and there is a period where the gut needs time to adjust. Stomach microbes change depending on what they are eating.

First time sheep out on pasture and forage shrubs, 90% of the pasture is eaten and 10% shrubs. After 4th exposure the ratio is 50/50 pasture to shrubs eaten.

Plant chemistry changes all the time. That is the problem with a monoculture. In the trial animals put on @5kgs from April to may (39-44Kgs) – check?

Shrubs change the micro climatic conditions. Shade = more grass on the south side.

Q: what is DSE / ha rate on perennial pastures / shrubs in low rainfall areas compared to other systems? No answer yet.

It is difficult getting species to purchase. Best way is to look for funding.

Animals feeding on perennial pastures and shrubs in better condition and stress free.

Bigger shrubs tend to be a harbourage for pests. Think about densities. If too dense it favours pests. Keep spaced to encourage pasture. Experimental work was done with tubestock.

Grassland Conservation, Nathan Wong, Trust for Nature

Black box rare in landscape 95% gone. Only 1% of grasslands left have never been cultivated. Less than 3.5% are in reserves. Rainforest has 95% remaining. Mallee has 25% remaining in reserves. Public land protection focused on waterways. Look to tourism as a strategy for farm income?

Grain and Graze 2, Native Pasture Cropping, Birchip Cropping Group, Jonathan Starks Ecologist "Making Conservation Pay"

Winter cereal sown into native summer species on sandy and clay soil. Three types of native grasses sown in each.

Pasture germination issues – ants liked the native grass seeds.

Pasture after 5 months;

Hopetoun 230kg/ha

Kewell 750kg/ha

Pasture after 18 months (*need to check*)

	Not Cropped	Cropped
Hopetoun	2753kg/ha	2924kg/ha
Kewell	3742kg/ha	4534kg/ha

Air seeder had wheat with disc seeder and knife points. Not ideal due to disturbance into 7 month old natives. Method damaged plants with discs. 12 inch spacing. Yield 2.4-3.4 tns/ha in heavy and light soil. Benefits Quail.

Ten times more Ryegrass on fallowed / stubble site. None really on native pasture site after cropping.

No weed control and good feed. High cost of seed establishment in trial as researches needed a high rate of native seeds.