



20 March 2012

Southern Rivers CMA  
26 Soho St, Cooma, NSW 2630

**Attention:** Mark Robertson & Tim Fletcher

## **Final Report for Purple Patch project (2007/4).**

Firstly I would like to thank the SRCMA management and staff for the opportunity to participate in this project. I believe this project is very well suited to the type of operation that we run in these marginal soils with high to medium value native grasses. Secondly I would like to thank you for the tolerance and understanding you have shown for my late completion of the project.

**In brief**, the project required the creation of a number of subdivisions that would create 14 additional paddocks with water infrastructure. This would be done by building 9.36 kilometres of new 7-wire electric fencing, 1.35 kilometres of plain 7-wire fencing with metal droppers, 1.9 kilometres of off-set electric fencing & the resurrection of 2.61 kilometres of both plain-wire & netting fences. The water infrastructure consisted of 2.4 kilometres of 38mm poly pipe that fed water from 4 existing dams and one 22,000 litre water tank to 4 troughs.



The fences were built predominantly on ridge lines except for one line that was intended to contain a sensitive hillside area containing a high percentage of erosion. In combination with the project fencing, 800 meters of fencing was financed and built by the land owner to create tree regeneration areas.

Work commenced on the project with the installation of



the water tank on the 6th June 2007. The following month all post holes were dug and by the end of 2007 the water infrastructure was complete and the majority of strainer posts & stays were installed in the main Purple Patch area (Bottom Log).

By October 2008, 2 ramps were built and all fencing in the Bottom Log area was operational (the gates were temporarily wired up and the fences not electrified).



It was from this date that the land could be managed in accordance with the aims of the Purple Patch project whereby areas of land can be systematically rested through the growth & seed setting periods.



Unfortunately towards the end of 2009, ten of the strainer posts (treated pine), that were well rammed into clay soils had risen out of the ground. This was due to the combination of the smooth parallel form of the posts, the tension of the wires and a wetting of the ground around them. The ten strainers were reinstalled with anchor pins and all future strainers were dealt with in the same way. Any existing strainers "at risk" of coming up had star pickets driven into their bases on site. 2.4 meter treated pine posts were used in the wetter gullies.



While the maximum carrying capacity of this property is 3000 DSE in a good season, the consequence of a drought stricken property has meant that the stock numbers were reduced to 70%. As the drought persisted through 2008 a feed lot was built and used to rest country. Despite this action it was seen that an operational change was necessary. The change was from a more labour intensive self-replacing Merino flock to a less labour intensive wether replacement flock. Stock numbers were heading towards 35% with the sale of all ewes. This decision would also require working off-farm and as a result work on the project slowed down through 2009-2010.

The winter and subsequent spring of 2010 was the breaking of the 8-year drought and the landscape changed dramatically with a great deal of valued tree seedlings coming up. With our stocking rates still very low we were able to allow these tree seedlings to grow without the pressure of stock. In addition tree guards were placed on the tree seedlings prior to any stock being introduced to these areas.



By February 2011 all new fences were completed except for the permanent swinging of gates and the "wiring up" of the electric fences. By the end of 2011, 39 gates were swung, all underground cable installed and the wiring up of all electric fences was completed.

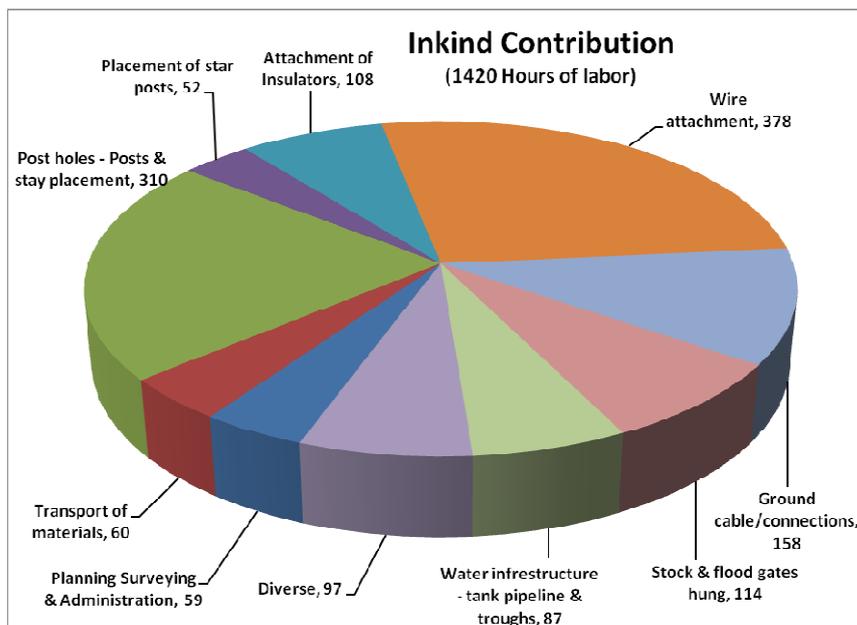
By the end of February 2012 the resurrection of the remaining old fences were completed, including the reconstruction of three creek crossings, the installation of the third ramp and the swinging of the three remaining gates.



## In-kind Contribution

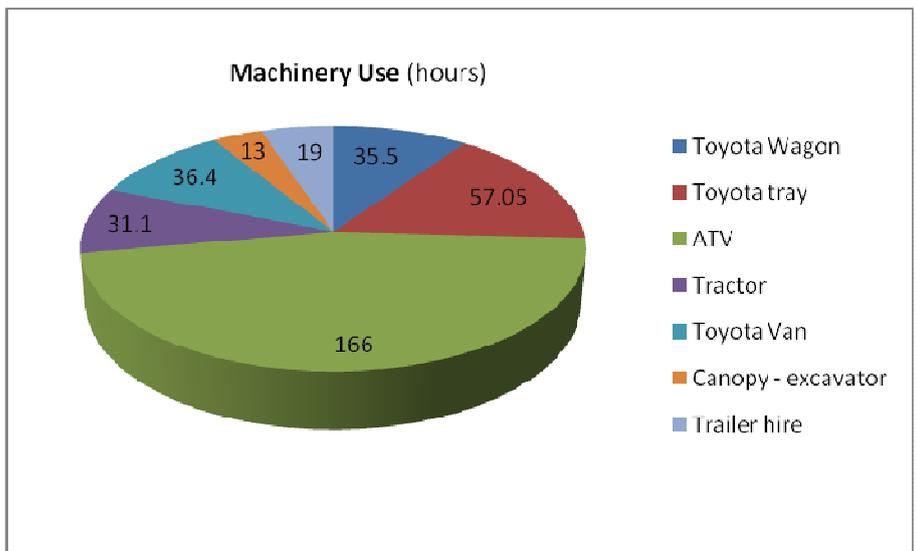
The labour element of the project has been documented on a daily basis in the different categories of work done. The use of support machinery has also been documented. In addition to the funding received for the project, an additional \$3,833 was spent by the landholder on materials that were not budgeted for in the original application.

Materials	Application	Cost
High conductivity ground cable		\$ 911.00
Heavy duty ground cable		\$ 134.00
Cable wire joint clamps	Joining underground cables to fence wires	\$ 226.00
Spiral wire joiners	Joining strained plain wire	\$ 109.00
roll of netting	For floodways	\$ 312.00
Porcelain Insulators	Insulation of high pressure/tension points	\$ 88.00
170 meters 3/4" poly pipe	Ground cable housing for gateways	\$ 56.00
Poly connections/taps	Additions to water siphon system	\$ 330.00
Insul timber	Insulation of Rinning strainers	\$ 100.00
treated pine strainers		\$ 493.00
treated pine stays		\$ 475.00
treated pine material	3 x Ramp construction	\$ 320.00
Ramp grids	Ramp construction	\$ 150.00
Diverse	varied	\$ 129.00
		<b>\$ 3,833.00</b>



The in-kind labour component of 1420 hours @ a rate of \$30 per hour would be equal to \$42,603. This includes hours as an operator/driver of machinery but does not include contract work paid for by the budgeted funding.

The use of machinery is shown in the adjacent diagram. Estimated rates for each machine vary depending on the equipment. For example; based on 1\$ per horsepower per hour with an operator. Tractor = 115hp (100hp) minus \$30 for the operator = \$70/hour. The ATV was rated @ \$10/hour. On these estimates the total cost of machinery use was \$7,004. All in-kind contribution including additional materials and machinery use was \$53,440



## Weed Control

Six years ago a rigorous weed control program was introduced where all weed infested areas were mapped in detail and pegged with colour-coded stakes. This documentation is updated as new incursions are discovered.

The High priority weeds are Serrated Tussock and more recently African Lovegrass. Following these are the Saffron, Scotch and Variegated thistles as well as some areas of Horehound, two sites of Blackberry and very recently three sites of St John's Wort.

The method of control has been using boom sprays, both Landcruiser & ATV for the thistles in the earlier years as well as spot spraying and chipping depending on the plant density, terrain and seasonal conditions. Low on the priority list is Sweet Brair. Two more recent weeds that have increased noticeably after the wetter season is Great Mullein (Aaron's Rod) and Fleabane.

Recent results show that the serrated Tussock has been reduced to less than 10% of its original level of infestation five years ago. African Lovegrass is in decline since it's "discovery" in January 2010, but a great deal of seed remains in the ground. Those areas infested with African Lovegrass are destocked during the Spring Summer periods until the weed has been treated so as to avoid the risk if seed transfer. Where Serrated Tussock and African Lovegrass have developed seed heads then the seed is harvested and destroyed.

## Maintenance

The majority of maintenance on the infrastructure has been in the area of "rising" strainer posts. Other than this the poor quality of treated pine stays has required that five stays have been replaced.

Also problems with short circuits on steel posts as the faulty Gallagher plastic pin-lock insulators could not retain their pins. Repairs to flood-gates have been required as expected. For the water infrastructure additional valve cocks and connections were required to enable the siphon lines to be primed/serviced.

## Summing up

While the project has only just been completed, the principles of the Purple Patch agreement have been put into practice on this property for the past 3 years. We have drastically reduced our stocking rates due to the effects of the prolonged drought. The last 2 years have seen the drought broken and the grasslands and tree seedlings thrive.

As the carrying capacity is far higher than the stocking rate there is little pressure on any land but still stock are moved, on a paddock rotation before the sheep camps show signs of degradation. This has also allowed us to hold certain paddocks vacant for longer periods of time and in effect "clean". This has shown a reduction in worm numbers reducing the need for drenching.

Regards,

Rowan Wright

