RCS
Transforming Agriculture

Building a Resilient Landscape and Business

Photo 1. Bokhara Plains, Brewarrina

July 2024

Introduction

The four Core Producers in the Rangelands Living Skin project (RLS), a Meat & Livestock Australia funded project focusing within the Western Division of NSW, are family businesses that are focussed on rebuilding the landscape they manage while at the same time being aware of the importance of maintaining a profitable and sustainable business. To paraphrase Joel Salatin of Polyface Farm, Virginia, USA, “a sustainable farm is where the next generation want to come back”. They want to come back to the farm because they can see there is an element of lifestyle, however importantly they can see that they can contribute to regenerating the landscape while earning a real wage. Three of these four businesses have the next generation working on farm and contributing to all facets of the business and in some cases bringing in new enterprises. The fourth business is not of suitable scale to sustain two families however one of those children is working on a large-scale operation that has been a long-term practitioner of time control and high density grazing. The other children in this business are still at university or school.

Management

These businesses follow the principles of regenerative or holistic grazing management and place great emphasis on.

- Planning, monitoring and managing their grazing and business.
- Ensuring there is an adequate rest or recovery period that is adjusted to suit the growth of desirable species.
- Stocking rate is adjusted to match carrying capacity.

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The region classified as the Western Division makes up 42% of NSW. The core producers are scattered across this vast region from one in the far southwest, one centrally located and two towards the Queensland border. Each of these producers has adopted and adapted these principles to suit their needs and circumstances as well as the climatic dictates of where they live. Rest and recovery periods vary across the properties to suit the above as well as the range of enterprises they might manage.

In the initial stages of adopting this system of management, mobs were aggregated, and existing infrastructure was utilised, and over time additional watering points have been added along with subdivision of paddocks which allows greater control of grazing and recovery periods. Resting paddocks to allow desirable plant species to recover also creates an attractant to the feral animal population. In districts where there is pressure on rested country from feral animals there has been a need for some form of exclusion fencing to assist in matching stocking rate to carrying capacity. There is no set formula, it is whatever suits the needs and circumstances of the manager.

Through the four years of the project (2020-2024), managers have continued their investment in infrastructure to assist with the control of graze and rest periods as per *Table 1 Rangelands Living Skin Capital Improvements*. This is in addition to the considerable investment they have made over the previous 15-25 years.

Rangelands Living Skin Capital Improvements					
Exclusion Fencing (km)	Internal Fencing (km)	Poly Pipe (km)	Tanks	Troughs	Yards
64.1	115	15.5	17	17	1

Table 1. Rangelands Living Skin Capital Improvements

Photo 2. Wire and Water, Wyndham, Wentworth

Some of the properties have invested in mechanical intervention to overcome woody weed invasion and improve water infiltration. In other situations, low banks have been used to hold water on scalded areas and claypans to encourage plant colonisation by pioneer plants. As a broad statement, they believe increasing

ground cover and plant diversity has enabled them to substantially increase carrying capacity, while at the same time improve landscape function.

All four core producers believe passionately in the need for adequate rest or recovery between grazes. Adequate rest provides plants with the opportunity for leaf growth allowing photosynthesis and plant replenishment to occur as well as rebuilding root reserves. Suitable rest or recovery allows desirable perennial plants to establish and seed, building resilience into the landscape through increased diversity. This combination of groundcover and plant diversity will contribute to improving biological activity in the soil.

These producers are flexible in their attitude toward numbers of livestock on hand. In other words, they are prepared to reduce numbers when feed supply is declining in a difficult season and at times destock if it is necessary to maintain ground cover and have the country in a rain ready state. It is just as important to upstock or increase livestock numbers in favourable seasons in order to stimulate plant activity and to utilise feed availability in those good years. In other words, they are very conscious of the need to match stocking rate to carrying capacity

Stocking Rate = Demand or the number of livestock on hand.
Carrying Capacity = Supply or the amount of feed available.

Early in 2023, Rolling Rainfall (RR = the previous 12 months rainfall in any given month) was declining and some of the core producers made the difficult decision to reduce numbers despite the declining sheep and cattle markets. This decision was made with the longer-term view that to take a financial hit now would ensure that the resilience they were building into the landscape would be maintained for the future and allow an earlier and more sustained recovery after a useful rain event.

Photo 3. Water Ponding, Gurrawarra, Bourke

	4 Year Average		
Key Performance Indicators	**RLS Average**	**Top 20%**	**Average**
ROA	3.8%	5.5%	1.8%
Asset Turnover	11.5%	11.1%	7.3%
Gross Margin	51.6%	59.6%	57.3%
Overhead Ratio	52.9%	34.6%	60.8%
People			
Gross Product ($/FTE)	496,017	734,777	481,878
DSE Managed/FTE	6,125	9,324	6,775

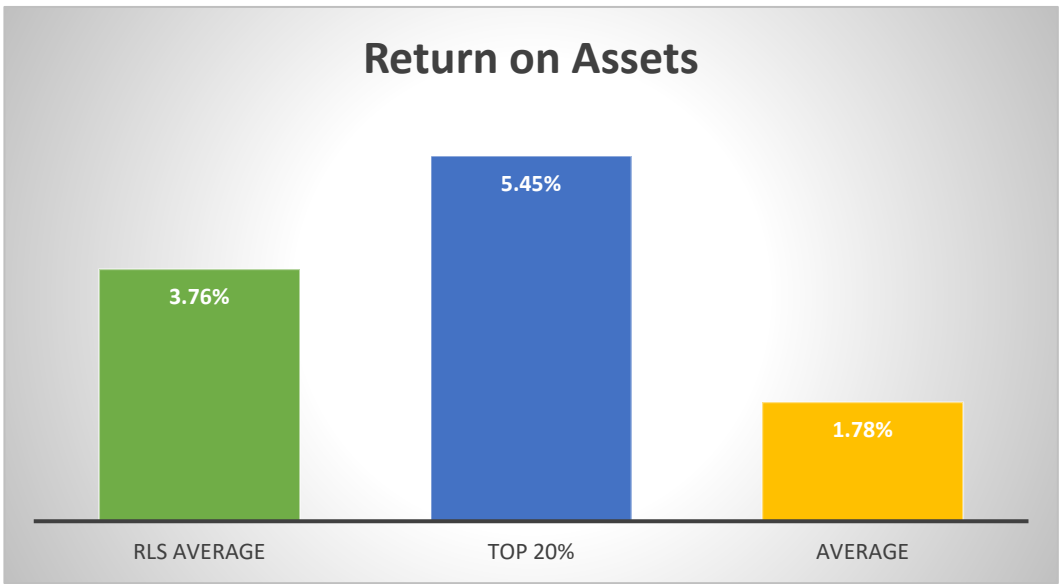
Table 2. Key Performance Indicators

Core producers have participated in the RCS financial benchmarking program ProfitProbe™ as well as submitted financial budgets. Above, *Table 2 Key Performance Indicators*, demonstrates the average performance of the Core Producers over the last four years against the Top 20% of producers and the Average of producers participating in ProfitProbe™ over the same period. These results include financial data from livestock enterprises across a wide range of regions across Australia. The final year, 2023-2024, takes into account the actuals for the four core producers and estimates for the Top 20% and Average.

There are four key ratios that drive business success; Return on Assets (ROA), Asset Turnover (ATO), Gross Margin (GM) and Overheads (OH). The aim is to increase the first three of these ratios and to reduce the Overheads ratio. Over the last 23 years, these ratios have sat around 7% for ROA, 15% ATO, 60% GM and 30% for OH for the Top 20% of producers.

Return on Assets (ROA)

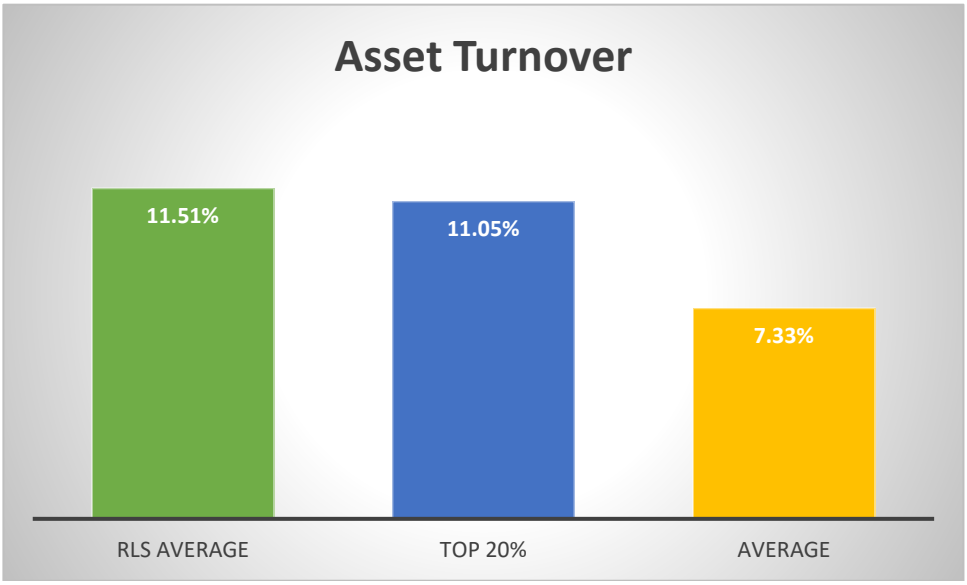
ROA is calculated as Earnings before Interest and Tax (EBIT) based on Gross Product divided by (Total closing assets – non-farm assets). The core producers have performed credibly against the cohort taking into account the difficult season and commodity prices. The financial year 22-23 was a particularly challenging period for grazing businesses. The Eastern Young Cattle Indicator fell from its June 2022 average of $5.78 to $3.01 in June 2023. A fall of 48% over the 12-month period. For the sheep industry, MLA's Mutton Indicator fell from a June 2022 average of $6.22 to $3.69 in June 2023; a fall of 41%. This had a drastic impact on livestock inventory values as well as actual sales which in turn impacted on Return on Assets.



Graph 1. Return on Assets

Asset Turnover Ratio (ATO)

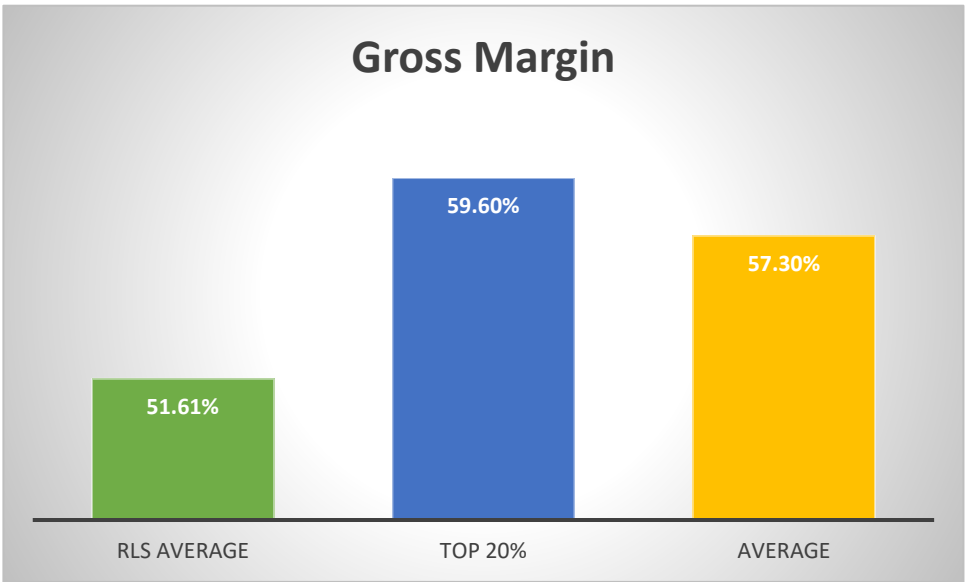
ATO = Total gross product divided by (Total closing assets – non-farm assets). ATO in the livestock industries is largely a function of herd or flock fertility and weight gain. In the case of the core producers, 3 of the 4 have sheep and goats and it is the high level of fertility in these two species that gives them advantage.



Graph 2. Asset Turnover

Gross Margin Ratio (GM)

GM = Total gross product – (Direct costs + Opportunity cost) divided by Total Gross Product. In most cases increased direct costs were related to selling costs and freight as a proportion of the diminished price received. In the case of producers in the Western Division who chose to sell stock that were not in anticipated condition and often had large distances to market. The core producers would prefer to sell stock and maintain ground cover rather than bear the cost and logistics of feeding. In many other cases feed costs can be a large component of direct costs in dry seasons.



Graph 3. Gross Margin

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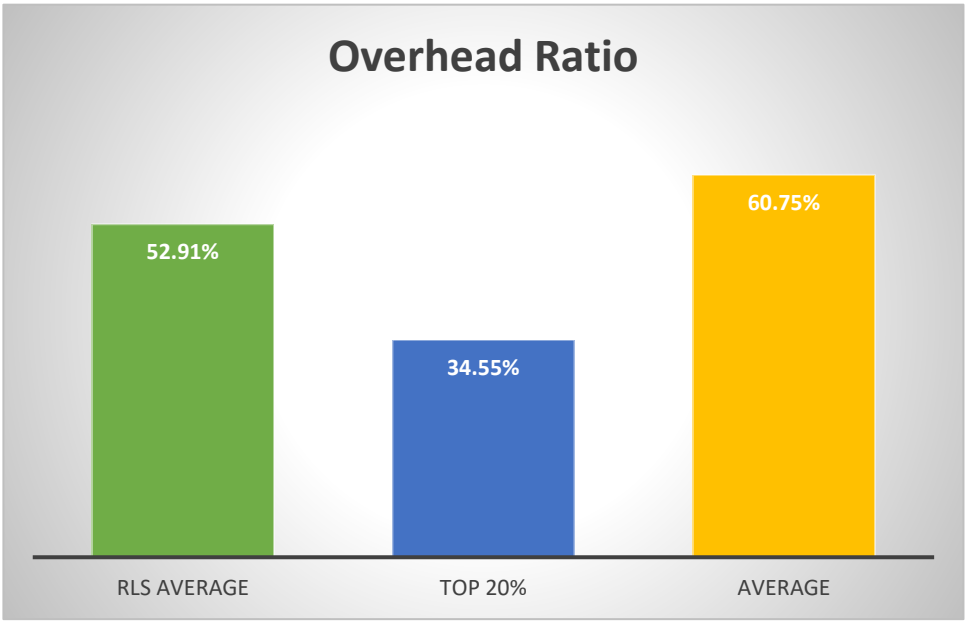
Overheads OH

OH = (Total overheads + lease payments) divided by Total Gross Product. Overheads have crept up across the livestock industries after a run of favourable seasons and increasing commodity prices. This is a common theme across the years. The core producers are included in this trend. Core producers have also taken on additional labour in the form of children coming back to the property and contributing to the business. In many cases that has also allowed a catchup process in repairs and maintenance which has exacerbated the increase in overheads.



Graph 4. Overheads

Management does matter and productive time spent in the office reaps rewards. The results achieved by the core producers demonstrate that by taking a holistic approach to management, it is possible to manage a profitable business while at the same time building resilience into the landscape. It is the attention to detail through planning and monitoring that allows these managers to focus on building a landscape that can make more effective use of rainfall in a region where rainfall is erratic. To quote one of the core producers, *"it's not how much rain that falls but how we use it that counts."*

Experiences Gained

A common theme when talking with the core producers is that they are observing increased plant diversity including deeper rooted perennial plants. These plants have capacity to open up the soil. The result is better water infiltration and greater benefit from rainfall. Maintenance of groundcover is imperative. Or as one manager put it "*don't take the coat off*". Through these practices they believe they are seeing increased resilience in their country that is resulting in a more profound recovery after a dry spell. This increased capacity combined with adhering to the No.1 grazing principle of Plan, Monitor and Manage removes a lot of the seasonal boom and bust that they and others have experienced in the past.

Photo 4. Shrubby Ground Cover, Wyndham, Wentworth

Sometimes it is the subtle differences that can make change to a landscape. Two of the businesses involved in the project have sheep, goats and cattle. The different grazing habits and patterns of each species can have a beneficial impact on regeneration of the landscape if managed. This may require different fences in parts of the property to ensure that controlled grazing is possible. The same applies to hoof action in different soil types where for example the deeper imprint from cattle after rain can be of benefit.

Photo 5. Field Day, Bokhara Plains, Brewarrina

Managers are cautious about the use of fire after experiences where in some instances country has taken years to recover. They would rather make use of animal impact and rest. Which is once again controlled through fencing and smaller paddocks. It is not all about grass, burr and forbs. Shrubs can be useful as part of the diversity in the landscape where they give protection to young desirables whether that is from livestock or the elements, such as wind, when they are attempting to establish themselves.

A key message is to work with the animal species that you enjoy working with and to turn that to your advantage.

Another element of the Rangelands Living Skin project that has been important to the core producers has been the sharing of knowledge and experience. All producers involved in the project have a curiosity and willingness to try new things. They have all gained greatly through being challenged by their peers and others to push the boundaries of accepted practice, occasionally trip up and continue to move forward to the next exciting development.

It is interesting to note that some of the thoughts and practices being implemented by the four core producers of the Rangelands Living Skin project have been considered in the past. In the Royal Commission of 1901 into the Western Lands of NSW, there are some interesting observations regarding the seasons, grazing practices and the changes that were occurring in the landscape. Among them is a Mr F. Turner, Botanist, Sydney. He advocated "*the dividing of the country into small paddocks … The paddocks should be grazed upon by the stock in such a manner that each one should have at least 3 to 4 months rest in the year.*" These thoughts were supported, and in a number of cases implemented, by a small number of managers and landholders across the Western Division, such as Mr W. Sawers of Bundabulla Station, Brewarrina.

Photo 6. Ground Cover, Wyndham, Wentworth

Photo 7. Wyndham, Wentworth.

For more information about the Rangelands Living Skin project, visit https://www.mla.com.au/research-and-development/Grazing-pasture-management/rangelands-living-skin/.

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