

Prepared by



Executive Summary

Winona is an 840 hectare grazing and pasture cropping property located to the north of Gulgong, in the New South Wales Central Highlands. Despite the cropping activities conducted on the property, income is primarily sourced from wool sales. The Seis family have managed the property since the 1970s, first with Colin Seis, and today with his son Nick.

With the primary goals of productivity in the form of wool production, along with improving sustainability of the property, the operations of the property involve the use of multiple regenerative practices. Firstly, pasture cropping, a technique developed by Colin Seis and implemented on the Winona property. This technique involves the planting of crops into the perennial pastures to facilitate soil fertility, ground cover, water infiltration, and improved soil health more generally. Secondly, an intensive rotational grazing system where livestock are rotated on a time-controlled basis to maximise capacity utilisation. Finally, the vertical stacking of enterprises. This involves the integration of multiple income producing enterprises to maximise the utilisation of pastures while improving soil health, fertility and ground cover.

To demonstrate the success of these methods in achieving the primary goals identified above, we have compared the financial information provided by Winona to relevant industry benchmarks – the 'Average Farm'. The benchmark used throughout the report is sourced from MLA Farm Survey Data.

Our analysis has resulted in various positive insights about the methods employed at Winona. The vertical stacking of enterprises increases income productivity per hectare beyond that of the Average Farm as the space is utilised for multiple income producing purposes. Moreover, a combination of good onsite water storage, pasture cropping, and vertical stacking of enterprises has enabled the property to maintain high productivity through periods of limited rainfall.

By integrating cropping and grazing enterprises, fodder expenses are significantly reduced aside from drought management strategic fodder purchases. The combination of regenerative practices has decreased the property's reliance on fertilisers, herbicides, and pesticides, which subsequently reduces the fertilizer expense relative to the average farm year on year.

The combination of these benefits has resulted in profit and gross margins for Winona consistently exceeding those of the Average Farm. The average amount by which the Winona has exceeded the average profit margin over the period is 22.89%. Consequently, Winona has been significantly more profitable over the 8-year period analysed compared to the Average Farm.

The improved production and revenue combined with reduced expenses resulting from Colin and Nick's pasture cropping and vertical stacking practices, has allowed Winona to be highly profitable, successful and sustainable compared to the Average Farm.

Introduction

Winona is located north of Gulgong, in the New South Wales Central Highlands. The farm is an 840 hectare grazing and pasture cropping property with primary income derived from the selling of wool. Colin Seis took over the management of Winona from his father in the 1970s. Today, Colin's son Nick, performs most of the day-to-day management.

Colin has implemented a number of regenerative practices in order to improve the productivity and sustainability of the property. In particular, the development and implementation of 'pasture cropping' and time-controlled rotational grazing, and the 'vertical-stacking' of cropping, native grass seed, sheep wool and meat enterprises.

The pasture cropping technique that Colin has developed and implemented has significantly decreased the reliance on herbicides and fertilizer use on Winona while maintaining crop and pasture production. The planting of crops into the perennial pastures has also resulted in a marked improvement in soils health, soil fertility, ground cover and water infiltration.

The vertical-stacking of enterprises and the implementation of pasture cropping has allowed Colin to seamlessly integrate the production of sheep, wool, and native grass seed on Winona.

This economic report illustrates the positive effects that regenerative practices has on the profitability, productivity, and natural capital of Winona. To do this, we will compare current financial and production figures to historical figures and industry benchmarks.

Please note – for the sake of privacy the data throughout this economic report has been 'de-identified'. That is, the data has been reported so that it does not represent the owner's actual financial position, rather it proportionally highlights the changes of incorporating regenerative farming practices. In particular, we have used an index to proportionally represent the financial figures. Where two datasets are compared, we index both sets of data to the benchmark data. All data in this analysis is presented on the basis of the financial year.

Benchmarking

In order to illustrate the success of the Winona enterprise, we have compared Winona's financials and productivity data to relevant industry benchmarks. In particular, we refer to the 'Average Farm' as the main indicator for our analysis.

For this Economic Report, the Average Farm is a Specialist Sheep Farm located in a Wheat-Sheep climate (as defined by the Department of Agriculture and Water Resources). The benchmark data for the Average Farm has been obtained from ABARES Farm Survey Data. The ABARES Farm Survey Data is based on surveys conducted with a representative sample of farms across Australia. Data is primarily collected through face-to-face interviews with farm owners/managers and detailed financial and physical information is obtained for the farm operations of the previous financial year. Survey data for individual farms is appropriately weighted to ensure data reliability for the entire population.

For more information on the farm survey data methodologies, please see:

<https://www.agriculture.gov.au/abares/research-topics/surveys/farm-definitions-methods>

Where appropriate, we have used relevant benchmarks – other than the one described above – as the Average Farm. This is noted, where necessary.

Report Data Sources:

Industry Benchmarks – MLA Farm Survey Data

(<http://apps.agriculture.gov.au/mla/>)

Financial Data – Colin Seis

Seasonal Conditions and Rainfall Data – Australian Government Bureau of Meteorology

Industry Insights – Published Industry Reports by:

- Meat and Livestock Australia
- Australian Bureau of Agricultural and Resource Economics

Operational Analysis

Production and Income

Production Mix

The regenerative farming practices that Colin and Nick have implemented on Winona has led to significantly increased production levels when compared to the Average Farm. With increased productivity, the income generated on Winona is also significantly higher than that of the Average Farm.

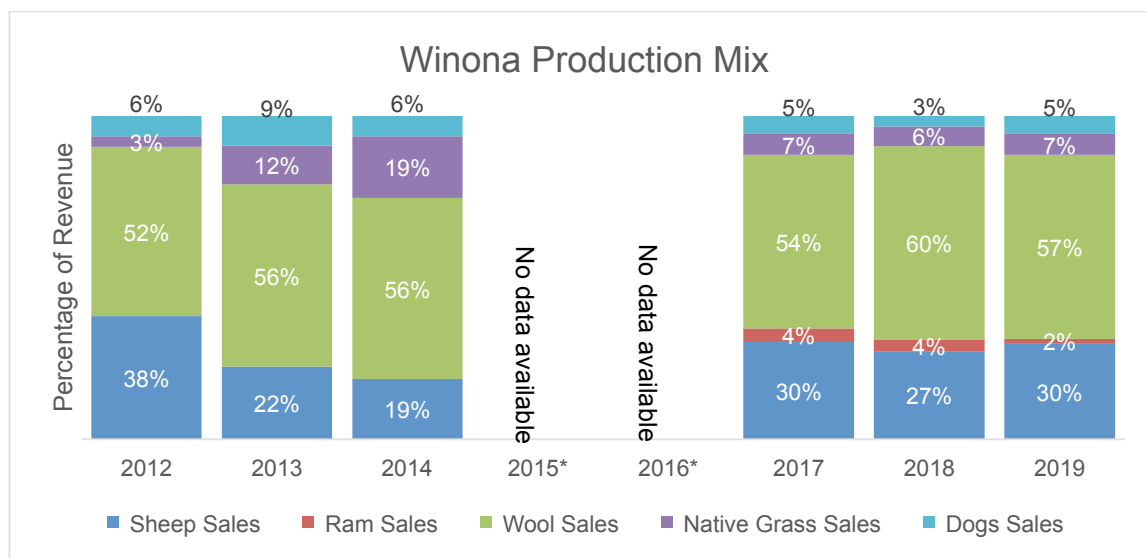


Figure 1: Winona Production Mix

Colin and Nick have five sources of income – Sheep Sales, Ram Sales, Wool Sales, Native Grass Sales and Dog Sales.

Figure 1 illustrates the overall distribution of the five productions. Wool sales form the majority of Winona’s revenue, accounting for at least 50% of production each year. This is followed by sheep sales which accounts for at least 20% of production each year.

With pasture cropping and time-controlled grazing well established as regenerative practices, Colin and Nick have successfully introduced the technique of ‘vertical stacking’ their productions. This has enabled Colin and Nick to use the native grassland more effectively in each paddock – native seed harvesting, pasture cropping and grazing sheep for wool and meat. These three uses of land are rotated seasonally, annually and every 3 to 5 years, depending on the prevailing seasonal conditions.

In this vertical stacking system, the productivity of the land is always being utilised and the per hectare production value of the land is maximised. The production of native grasses is primarily produced to provide fodder for sheep during spring and summer. Colin and Nick implement pasture cropping to produce barley, legumes, and turnips to sustain fodder throughout the dormant winter months, improving overall year round production growth. Additionally, native grasses provide incremental revenue through seed sales.

The use of pasture cropping and vertical stacking enables integration of sheep and crop production, which optimises production of both enterprises while the regenerative benefits minimise the costs of chemical inputs, machinery use and weed management.

* Data has not been made available for these years.

Total Revenue Per Ha

Figure 2 compares Winona’s revenue to that of the Average Farm on a per hectare basis. Please note that the revenue for Winona includes all five enterprises.

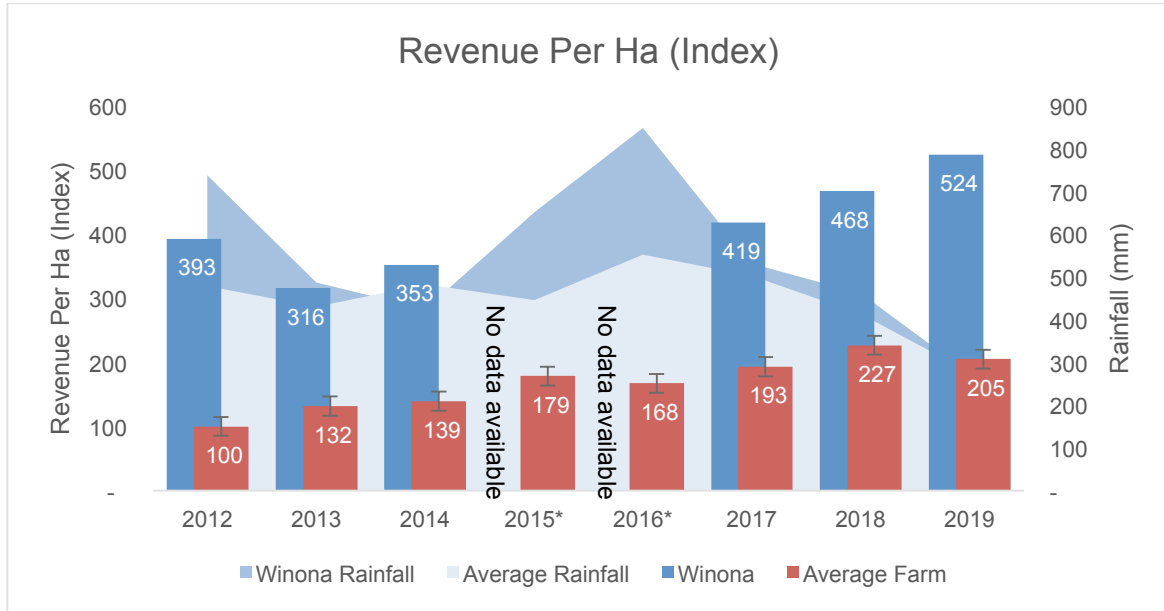


Figure 2: Revenue Per Ha (Index)

Data Insights:

- Winona experiences significant growth in revenue per hectare from 2017 to 2019. The increase in revenue is due to the increased sheep and wool sales. Additionally, sheep and wool production has been consistently maintained by using the fodder produced in the cropped pastures to feed sheep.
- By implementing the technique of vertical stacking, sheep and crop production is being run on the same land, which increases production and therefore income and revenue per hectare. As such, Winona significantly outperforms the Average Farm in Revenue Per Ha.

* Data has not been made available for these years.

Wool Production Per Ha

Figure 3 illustrates the comparison of wool produced in kilograms per hectare between Winona and the Average Farm.

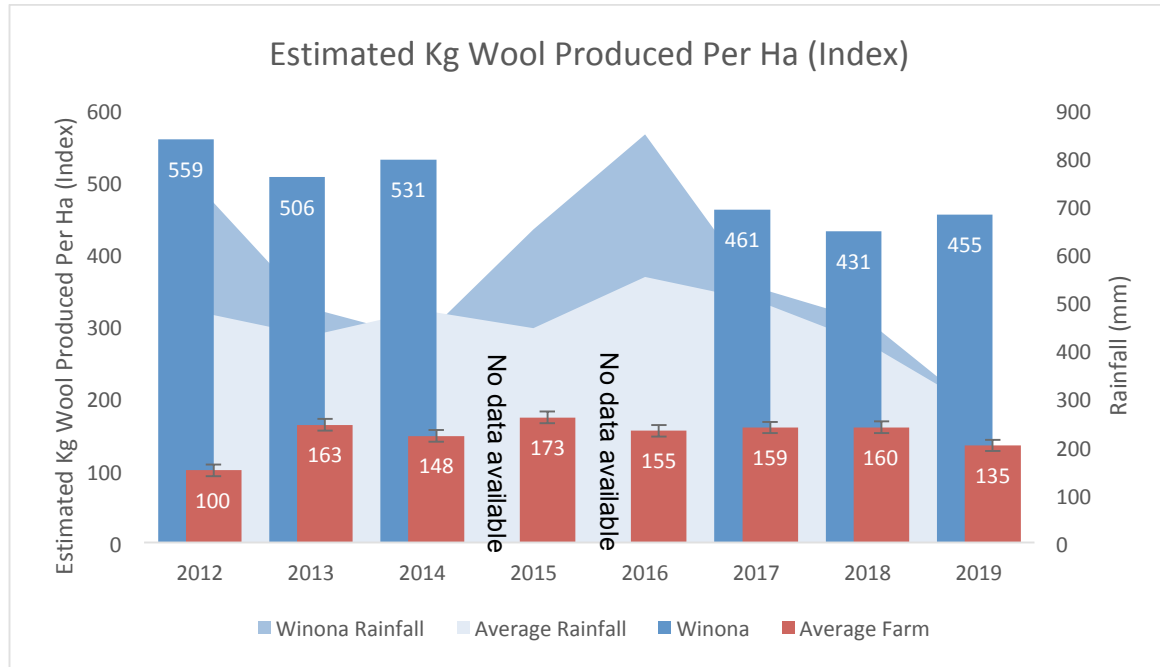


Figure 3: Wool Produced Kg Per Ha (Index)

Data Insights:

- Winona consistently performs well above the Average Farm in terms of wool production.
- Despite a decrease in rainfall in recent years, Colin and Nick are able to produce significantly more wool on a per hectare basis. A combination of good onsite water storage, pasture cropping and vertical stacking of enterprises has allowed Colin and Nick to maintain Winona's high productivity and sustainability even in lower rainfall years.

* Data has not been made available for these years.

Wool Sales Per Ha

Figure 4 outlines the wool sales per hectare for Winona to that of the Average Farm. Wool production is the primary source of income for Winona. As can be seen, Winona's wool sales are consistent and significantly exceed the Average Farm's throughout the years.

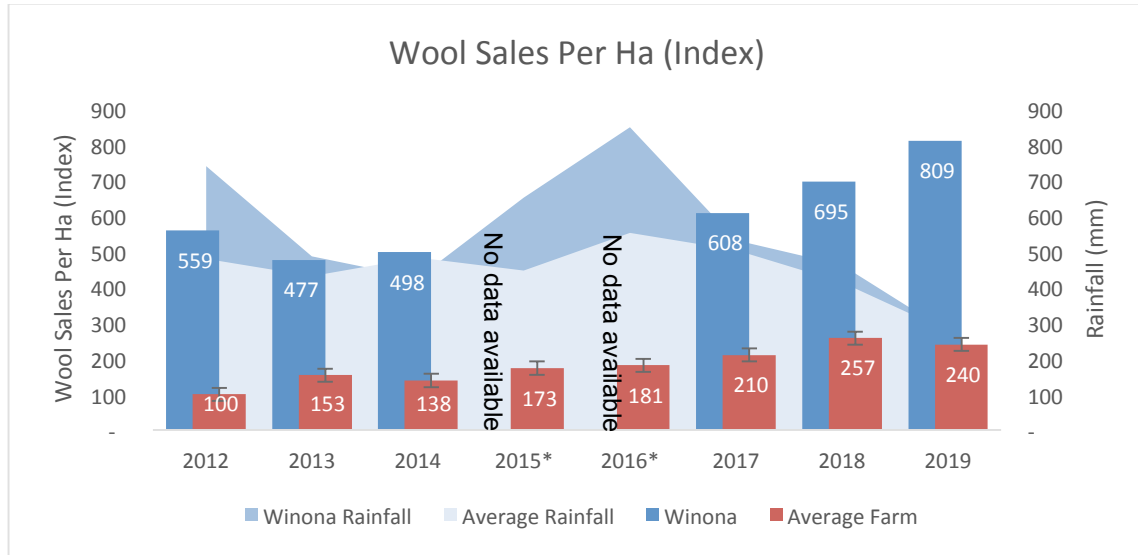


Figure 4: Wool Sales Per Ha (Index)

Data Insights:

- From 2017 to 2019, Winona's wool sales steadily increased. In 2019, Winona's wool sales peaks due to Colin and Nick selling-off stock to sustain profitability during the drought.

* Data has not been made available for these years.

Sheep Sales Per Ha

Figure 5 compares Winona’s sheep sales per hectare to that of the Average Farm. Sheep sales are the second largest revenue source for Winona – accounting for at least 20% of income each year. In general, the number of sheep sales per hectare for the Average Farm exceed Winona’s.

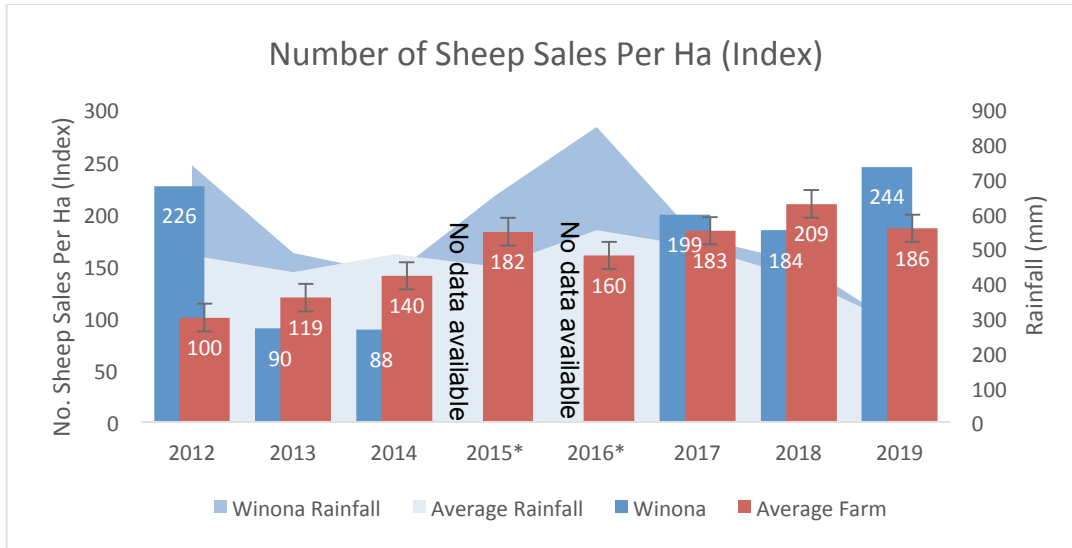


Figure 5: Number of Sheep Sales Per Ha (Index)

Data Insights:

- From 2017 to 2019, sheep sales increase due to selling-off stock as a result of drought. The number of sheep sales for Winona is consistent with the Average Farm for these years.
- In 2013 and 2014 there is a significant decrease in sheep sales. This results from a major sell-off of sheep in 2012. Consequently, there was a reduced number of sheep available to sell in 2013 and 2014

* Data has not been made available for these years.

Expenses

Fertilizer Expense

Figure 6 illustrates Winona's fertilizer expenses per hectare compared to the Average Farm's. Overall, regenerative practices have greatly decreased the reliance on fertilisers, herbicides, and pesticides. As can be seen, Winona spends significantly less on fertilizer. This is a result of integrating sheep, wool and crop production through vertical stacking.

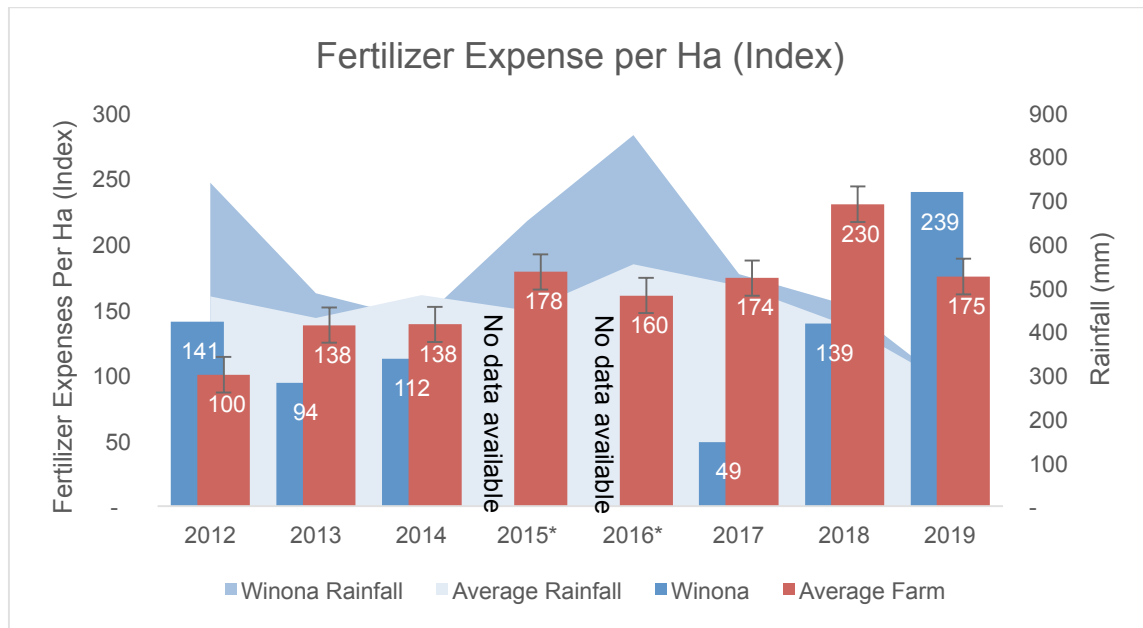


Figure 6: Fertilizer Expense Per Ha (Index)

Data Insights:

- Winona's fertilizer per Ha is considerably less than the Average Farm for all years used in this analysis – except for 2012 & 2019
- In general, the implementation of pasture cropping and vertical stacking has saved input costs, meaning that there is no need of ploughing, no killing off weeds with chemicals, and minimal need for seed and fertiliser. The abundant ground cover also increases soil resilience and minimises the risk of soil loss and degradation. Hence, Winona's expenditure is significantly lower than the Average Farm.
- In 2012 & 2019 there is an increase in fertiliser expense. As a result of drought, there were more forage crops grown for sheep, which required additional fertiliser.

* Data has not been made available for these years.

Seed Expense

Figure 7 illustrates Winona’s seed expense per hectare compared to the Average Farm’s. In most years of this analysis, Winona’s seed expense per hectare is greater than the average farm.

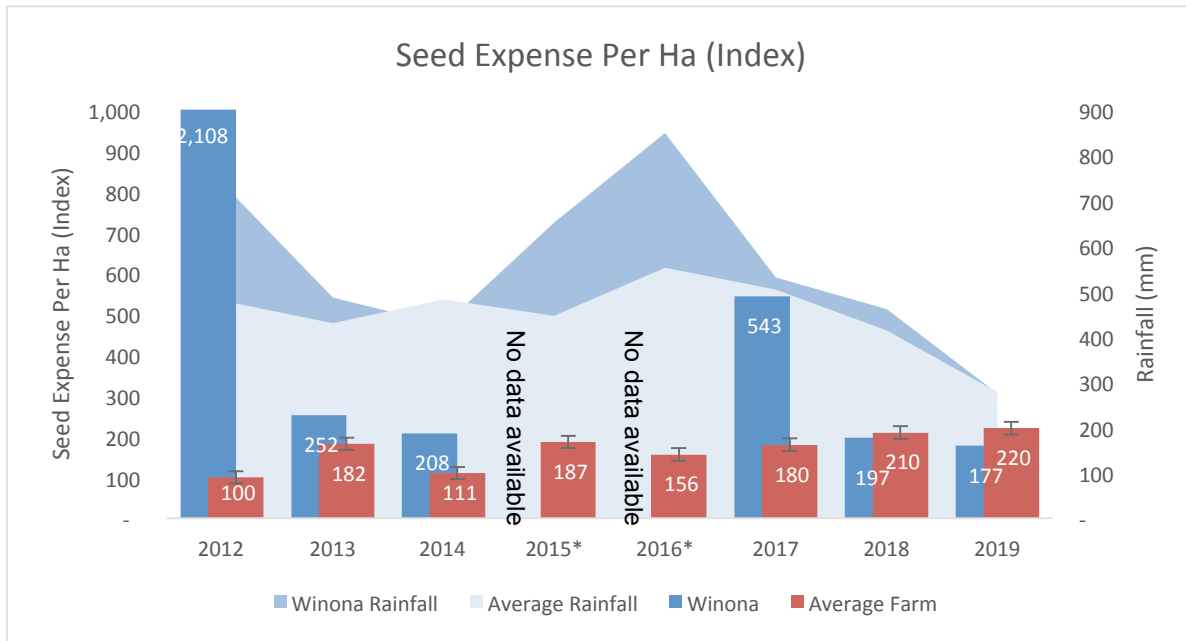


Figure 7: Seed Expense Per Ha (Index)

Data Insights:

- Winona’s increased seed expense per Ha as compared to the average farm is a result of Colin and Nick’s pasture cropping practices. This is a necessary additional cost of pasture cropping as the practice requires higher investment in seeding pastures.
- Seed expenses in 2012 were considerably higher than usual on Winona. Seed on Winona is used for forage crops and in 2012, Colin and Nick were experimenting with sowing multi-species forage crops. This resulted in significantly increased seed expenditure.

* Data has not been made available for these years.

Fodder Expense

Figure 8 illustrates Winona’s fodder expense per hectare compared to that of the Average Farm. As seen below, with the exception of 2014, Colin and Nick spend significantly less than that of the Average Farm. Rather than purchasing fodder, a significant amount of what is produced from cropping, such as barley, legumes, and turnips, is harvested and used as feed.

Additionally, as part of Colin and Nick’s pasture cropping system, the sheep are used to graze pasture. Sheep lightly graze the growing grain crop after it becomes established but prior to the seed development. Once the crop is harvested the sheep begin to graze on the regrowth while the crop matures. This integration of enterprises not only optimises production but also minimises fodder expense.

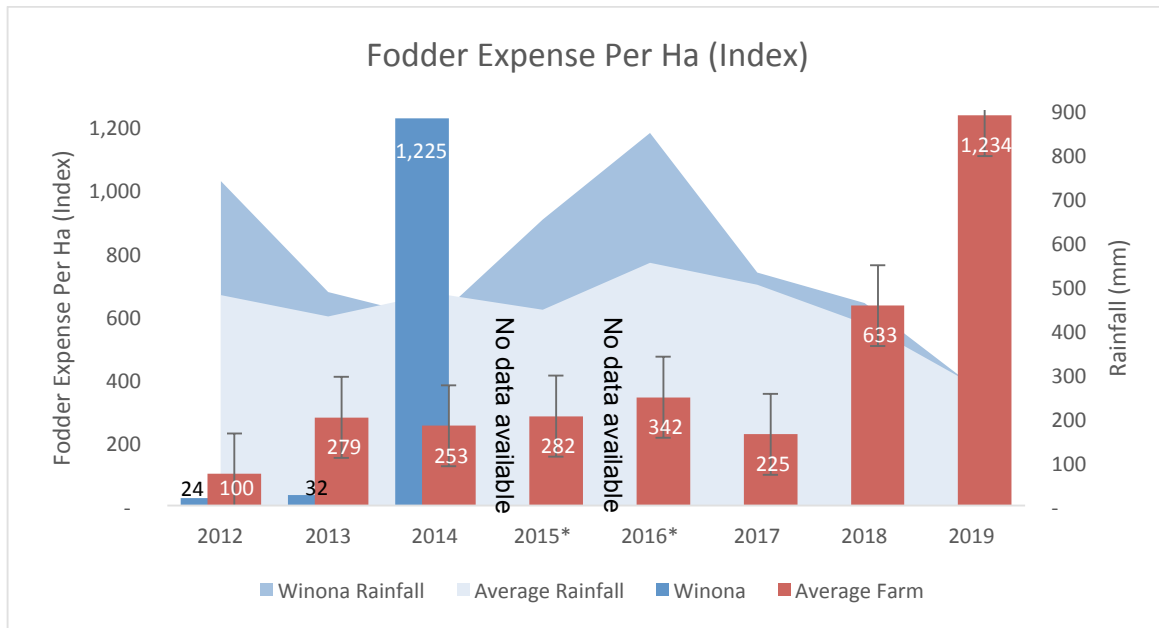


Figure 8: Fodder Expense Per Ha (Index)

Data Insights:

- Winona has nil fodder expenses in 2017, 2018 and 2019 and minimal fodder expenses in 2012 and 2013. This is a direct result of utilising fodder produced on the farm.
- In 2014, Colin and Nick purchased a significant amount of fodder as part of the drought planning and management strategy for Winona.

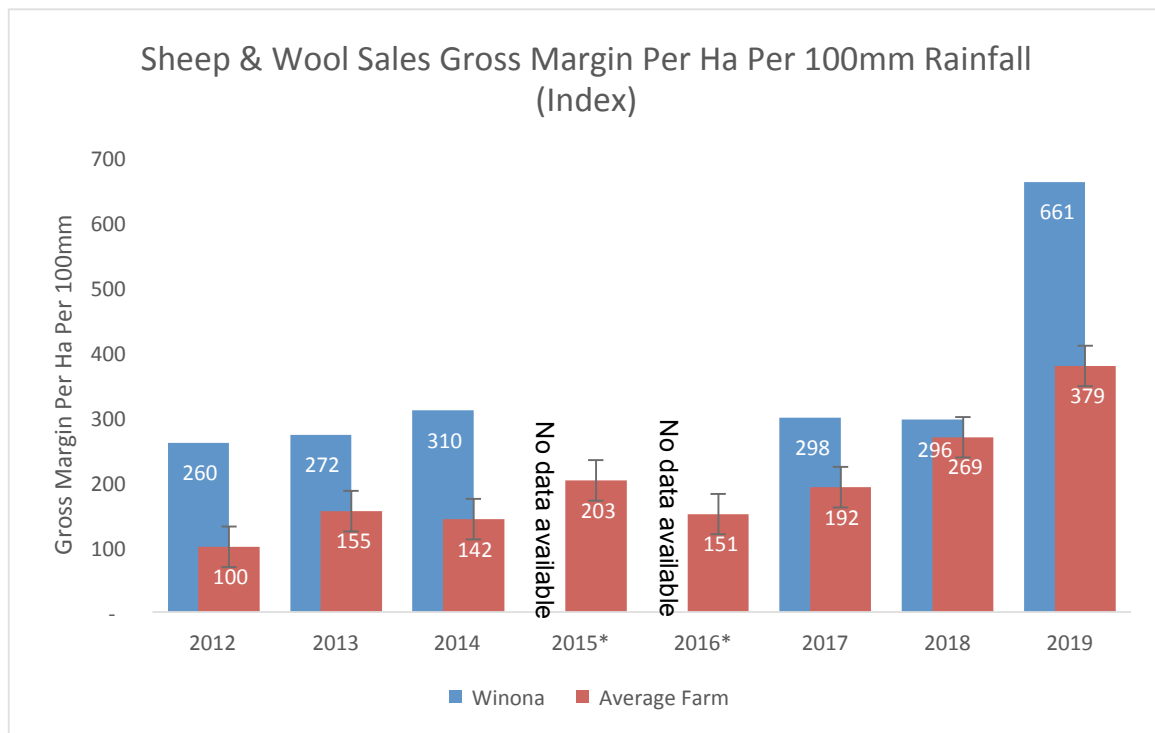
* Data has not been made available for these years.

Business Performance and Sustainability Analysis

Gross Margin

Sheep and Wool Sales Gross Margin

Sheep and wool sales are the primary source of income on Winona. Figure 9 illustrates the sheep and wool sales gross margin of Winona compared to the Average Farm. Gross margin is a measure of total sales minus the direct costs of wool and sheep production. Gross margin per Ha per 100mm of rainfall is commonly used in the primary production industry to illustrate an enterprise effective utilisation of available land and water.



* Data has not been made available for these years.

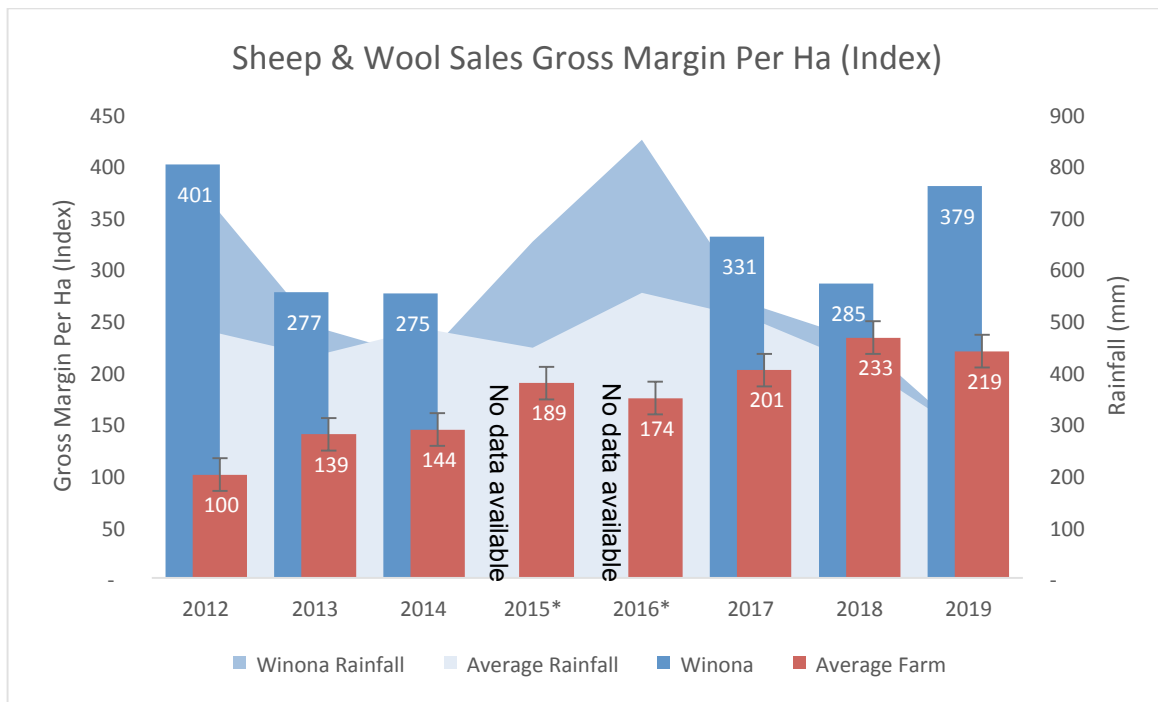


Figure 9: Sheep & Wool Sales Gross Margin Per Hectare Per 100mm Rainfall (Index)

Data Insights:

- Winona’s gross margin per Ha per 100mm of rainfall significantly outperforms the Average Farm in all years. This is a result of higher production and the associated income, as well as, significantly reduced expenses each year.
- From 2013 to 2018, Colin and Nick sell a consistent number of sheep and wool each year. In 2019, Colin and Nick experience a significant increase in the number of sheep and wool sold. This is due to the high sell-off as a result of the 2019 drought conditions. This leads to an increase in gross margin per Ha per 100mm in 2019.
- Colin and Nick significantly increased sheep and wool sales in 2012. This resulted in a high gross margin per Ha.

* Data has not been made available for these years.

Profit Margin Ratio

Table 1 includes the profit margin ratio of Winona and the Average Farm. The profit margin ratio is a measure of profits divided by revenue. Essentially, this ratio shows what percentage of sales become profit after all expenses are paid by the business.

	2012	2013	2014	2015*	2016*	2017	2018	2019	Average
Winona	5.05%	-6.65%	16.63%	N/A	N/A	38.37%	21.79%	41.09%	19.38%
Average Farm	-4.31%	-26.61%	-14.74%	1.59%	0.31%	23.71%	3.44%	-11.45%	-3.51%
Difference	9.36%	19.96%	31.37%	N/A	N/A	14.66%	18.35%	52.54%	22.89%

Table 1: Profit Margin Ratio

Data Insights:

- Winona experiences a greater profit margin ratio in all years that were part of this analysis. The difference between Winona and the Average Farm's results each year illustrate high profitability of Winona.
- Winona's profit margin ratio is significantly increased in 2019 resulting from the sell-off during the drought.
- In 2013, Winona's profit margin ratio was -6.65%. This is due to the enterprise making a loss in the 2013 financial year. In 2013 there was a general reduction in income and a marked increase in, Dog Expenses, Repairs & Maintenance and Employee expenses.

* Data has not been made available for these years.

Farm Business Profit

Figure 10 illustrates the business profit per hectare of Winona and the Average Farm. Business profit is calculated as total revenue less total direct and overhead costs for Winona and the Average Farm.

- Winona has consistently performed well above the Average Farm.
- Winona has experienced peaks in business profit in 2017, 2018 and 2019, despite a decrease in annual rainfall.

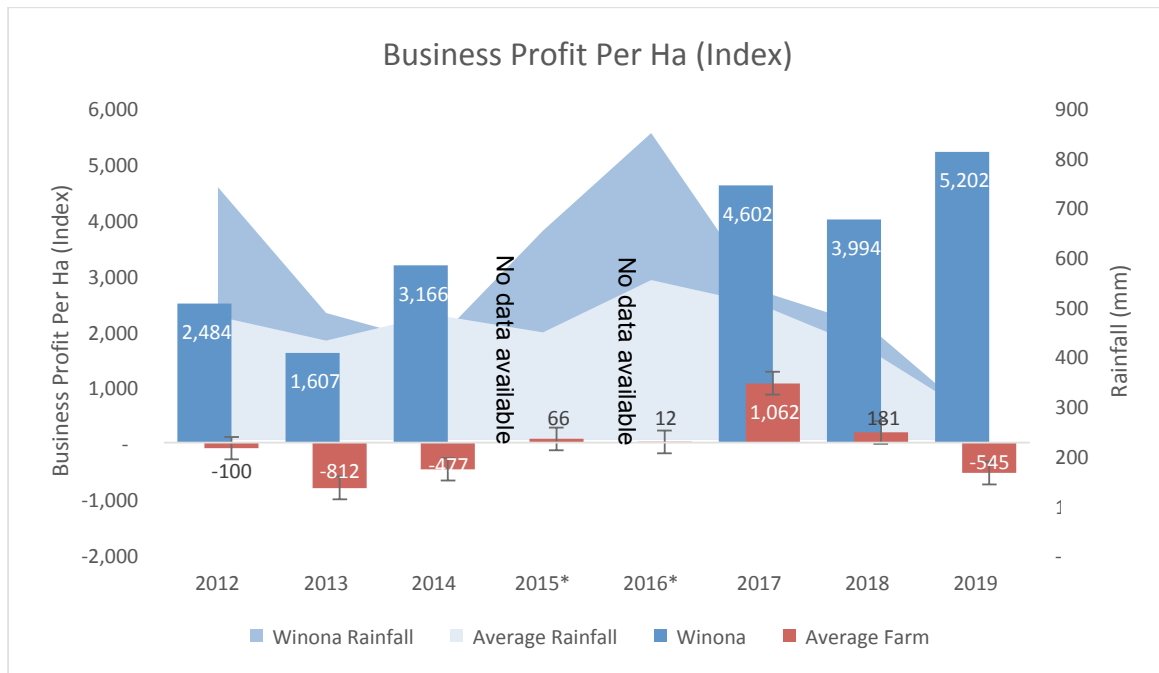


Figure 10: Business Profit (Index)

Please Note; To align our Winona’s Business Profit figures with that of the Average Farm, related employee expenses have been excluded from this analysis.

Data Insights:

- In 2019, Colin and Nick sold off a considerable amount of wool and sheep due to drought. This resulted in an increase in Winona’s wool sales by 16% and sheep sales to increase by 25%, accounting for the overall increase of business profit.
- In 2013 there is a decrease in business profit for Winona. This is due to a significant decrease in wool and sheep sales.

Conclusion

Colin and Nick’s pasture cropping and vertical stacking practices have drastically improved both the ecological health of the land and business profitability. This allows Winona to still maintain a highly successful enterprise regardless of difficult seasonal conditions.

Winona significantly outperforms the Average Farm in terms of production, revenue and the key expenses considered in this analysis. This results in greater profitability compared to the Average Farm, year on year.

Colin and Nick’s focus on repairing and maintaining the ecological health of Winona has significantly improved the financial resilience of the enterprise.

* Data has not been made available for these years.