

# EXAMPLE STRATEGICAL PLAN

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**Farm Optimisation  
Group**

# INTRODUCTION

This document outlines key strategical management decisions aimed to optimise the use of farmland and maximise long term return.


The results have been generated using Farm Optimiser, an advanced whole farm optimisation model. Farm Optimiser was calibrated using on-farm data to provide customised and highly specific outputs (see the calibration document). The farm plan generated was based on the current enterprise allocation and a medium-term price outlook.

Disclaimer:

The recommendations provided are for informational purposes only and do not guarantee specific outcomes. Farming involves inherent risks, and Farm Optimisation Group are not responsible for any losses resulting from the implementation of these suggestions.



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# FUTURE

Optimising farm systems is an ongoing task. Each year we can improve and expanded our analysis by:

- i. Adjusting the price outlook.
- ii. Improving the model calibration using additional on-farm data.
- iii. Examining additional management pathways.
- iv. Including new research findings.



# STRATEGICAL PLAN

The following section outlines the base farm plan (this is the optimal plan for an average year). Tactical adjustments can be made to this plan as the year unfolds (as outlined in the final section).



# SUMMARY

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	<b>Profit (\$)</b>	<b>Stocking Rate</b>	<b>Pasture area (% of farm)</b>	<b>Cereal area (% of farm)</b>	<b>Canola area (% of farm)</b>	<b>Supplement (t)</b>
<b>Summary</b>	257924	21.2	38	45	17	255

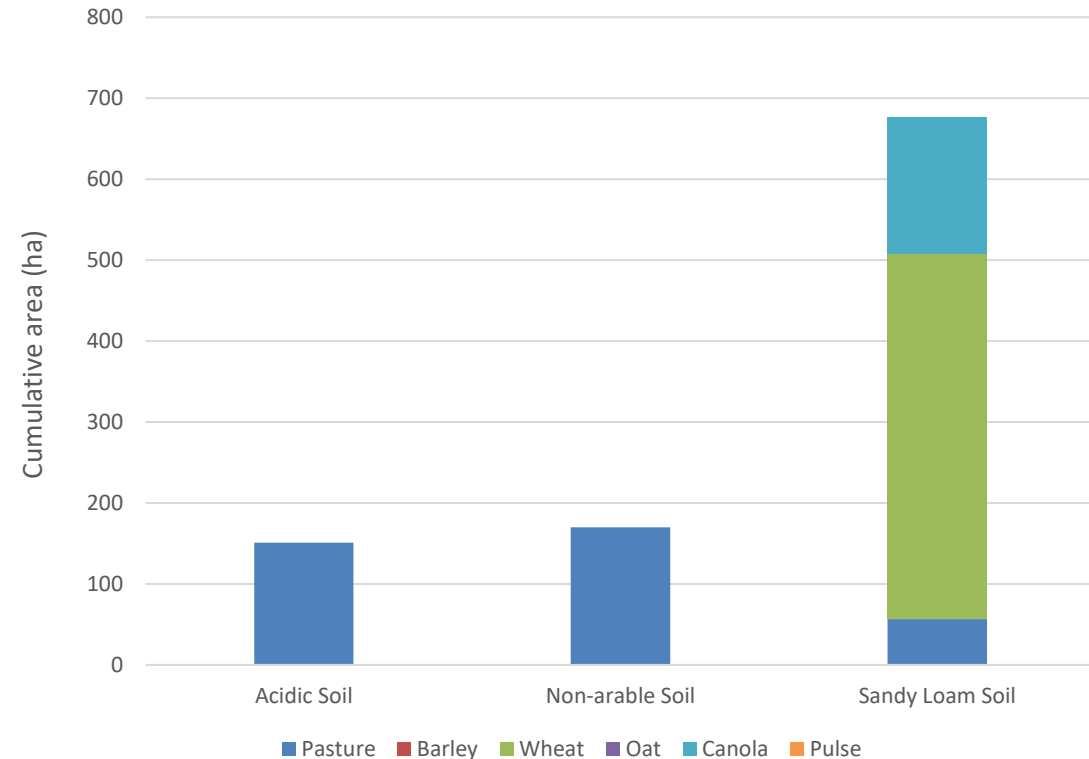
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# EXPECTED PROFIT AND LOSS

Revenue	Total Revenue	\$1,159,581
	grain	\$692,605
	sheep sales	\$225,005
	wool	\$241,971
Expense	Total Expenses	\$844,325
	crop	\$292,868
	fixed	\$140,305
	labour	\$89,896
	machinery	\$78,097
	pasture	\$26,904
	stock husb	\$113,907
	stock purchase	\$32,366
	stock sup	\$69,983
Total	EBITDA	\$315,256
	Depreciation	\$56,840
	Asset value change	-\$861
	Profit	\$257,556

# LAND ALLOCATION

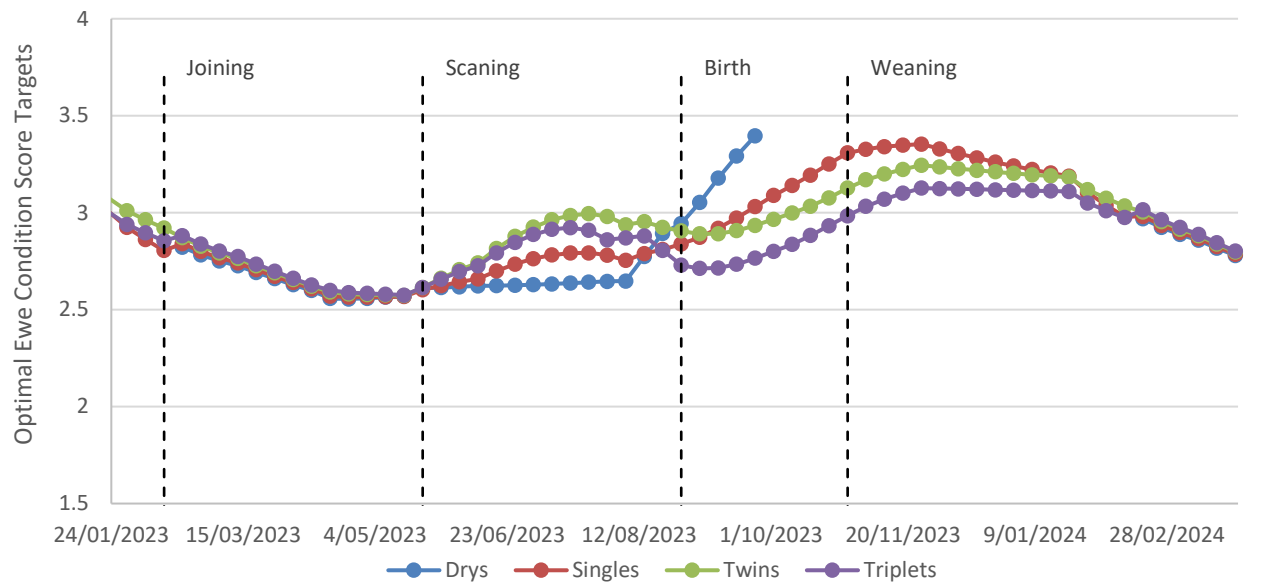
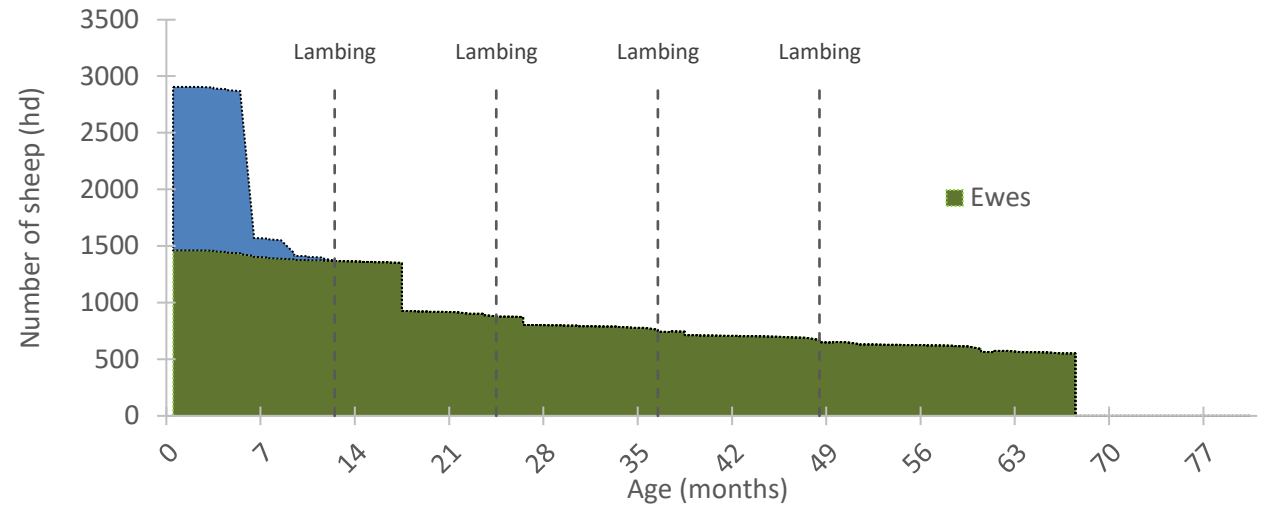
- The optimal land use allocation for paddocks that have acidic soil type or are non-arable is 100% pasture. This allocation remains consistent across all weather conditions and years.
- On 64% of the paddocks with acidic soil type it is optimal to establish vetch pastures to boost winter feed availability.
- On paddocks with sandy loam soil type, the potential for increased profitability exists through tactical adjustments to the allocation of wheat and pasture, contingent upon the timing of the break (for further insights, refer to the Tactical Adjustments section)





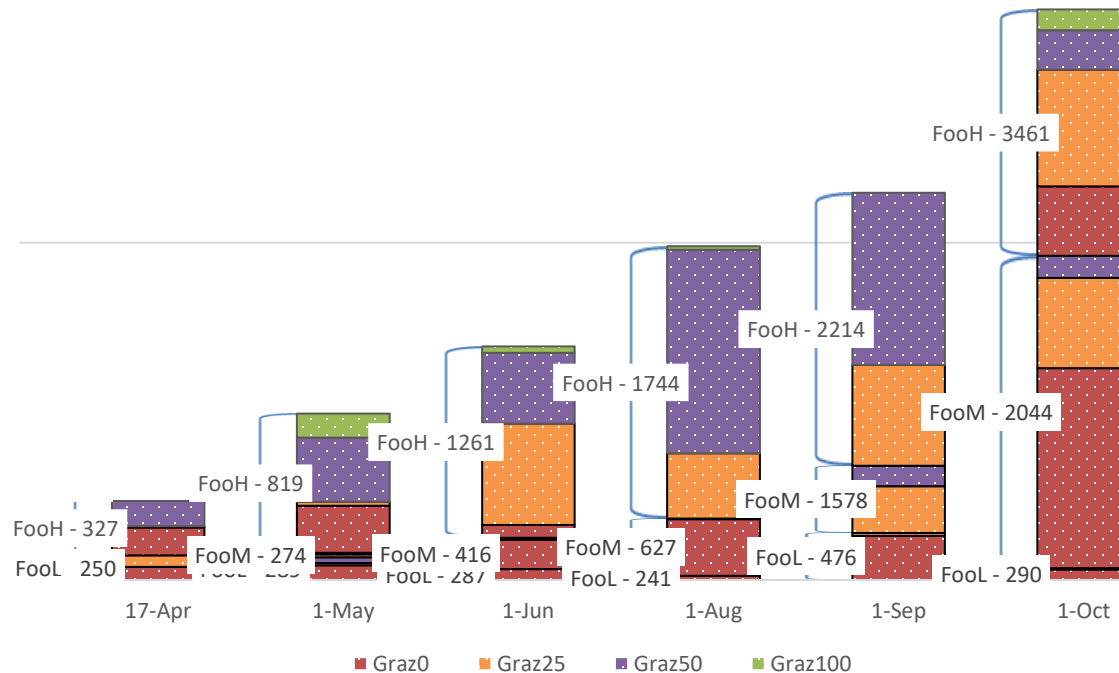
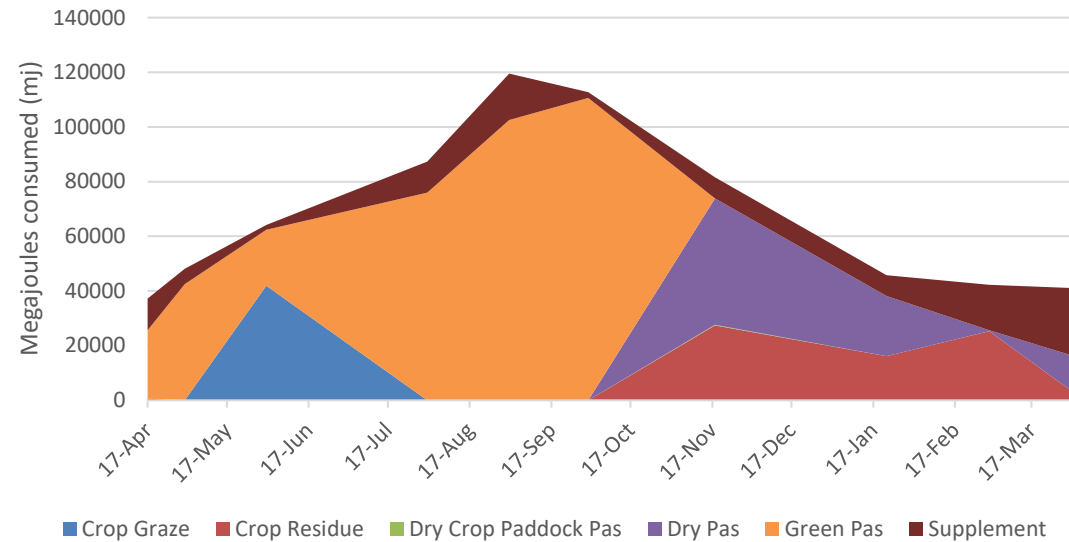
# LIVESTOCK MANAGEMENT

- Majority sale of wethers at 6 months of age at approximately 45-48kg liveweight. Reaching this target requires priority management of merino lambs.
- Sale of dry ewes mid spring after reaching 60kg.
- Singles and multiples are differentially managed so that twins are 3 to 4 kg heavier than the singles at lambing. The proportion of triplet-bearing ewes determines whether it is profitable to scan for litter size to allow differential management of the triplet bearing ewes.



# FEED MANAGEMENT

- Prior to sale the wether lambs graze high quality stubble and are fed supplement to maximise growth rates.
- Crop grazing is used in all years to defer pastures over winter.



Grazing management: optimal grazing intensity of each paddock during the growing season based on FOO.

Note: There are 4 grazing options. Graz0 means no grazing and Graz100 means graze 100% of the available feed.

# TACTICAL ADJUSTMENTS

The following section outlines key tactical adjustments that can be made as the year unfolds.

Note, a key aspect of the Farm Optimiser model that sets it apart from other tools is its realistic representation of tactical decision making. Farm Optimiser represents a large array of tactical options and accurately reflects the flow on effects of tactical adjustments (e.g. how increasing canola area in the current year effects rotation management in the following years). Additionally, as in reality, Farm Optimiser reflects future uncertainty when making tactical decisions (e.g. at the break of season there is still uncertainty about the spring conditions).



# EARLY BREAK

- On sandy loam soil wheat area is increased by 30ha and vetch pasture is reduced by 30ha.
- Minimal supplementary feeding required during the growing season.
- Retain drys ewes for an extra month, increasing sale weight to 65kg.
- Boost liveweight of singles by 3-5kgs.

# FALSE BREAK

- On sandy loam soil, the wheat area is expanded by 50 hectares, while the vetch pasture is decreased by 50 hectares. Achieving this adjustment necessitates delaying the establishment of wheat or vetch pasture on the designated "tactical paddocks" until the confirmation or denial of a false break has been ascertained.
- After scanning, prioritise the feeding of twins and triplets so they hit the usual condition target (this will require supplement).
- The winter condition targets are lowered by ~2-5kgs for dries and singles to save some supplementary feeding.
- Significant supplementary feeding required through until early spring.
- False breaks negatively impact the livestock enterprise more than the crop enterprise.

# LATE BREAK

- On sandy loam soil, the wheat area is expanded by 36 hectares, while the vetch pasture is decreased by 36 hectares.
- Livestock condition targets remain similar.
- Slightly above average supplementary feeding required through until early spring.

# GOOD SPRING

- Dry pasture consumption is increased allowing stubbles to be deferred until late summer. Pasture is consumed first because the deterioration of stubble is lower than pasture.
- Ewe condition is increased by ~1-2kg during summer.

# POOR SPRING

- Ewe condition is reduced by ~1-2kg during summer.
- Reduce dry pasture consumption to ensure minimum ground cover of 500kg/ha over the summer period.
- Increase stubble grazing early, using supplement to maintain stock condition.
- After a poor spring, supplementary feeding becomes the main feed source during Autumn (using dry pasture and any remaining stubble to fill sheep intake).
- It is optimal to feed grain rather than incur excessive weight loss.

## Poor spring following a false break:

- A poor spring following a false break is the worst outcome. In these years it is optimal to sell ~400 ewes to reduce grazing pressure.

## Confinement feeding:

- The extra supplementary feeding required following a poor spring requires confinement feeding to minimize the risk of over-grazing and erosion.
- If confinement is not possible then other management changes may be required to manage the risks



# FINANCIAL OUTCOME

Expected financial outcome for each weather-year



		EARLY BREAK WITH FOLLOW UP RAINS AND A GOOD SPRING	EARLY BREAK WITH FOLLOW UP RAINS AND A POOR SPRING	FALSE BREAK WITH A GOOD SPRING	FALSE BREAK WITH A POOR SPRING	LATE BREAK WITH A GOOD SPRING	LATE BREAK WITH A POOR SPRING
<b>Revenue</b>	<b>Total Revenue</b>	\$1,247,000	\$1,153,000	\$1,145,000	\$922,000	\$1,196,000	\$958,000
	grain	\$685,000	\$582,000	\$638,000	\$419,000	\$653,000	\$417,000
	sheep sales	\$283,000	\$298,000	\$246,000	\$250,000	\$279,000	\$284,000
	wool	\$278,000	\$273,000	\$260,000	\$252,000	\$263,000	\$257,000
<b>Expense</b>	<b>Total Expenses</b>	\$824,000	\$879,000	\$906,000	\$1,127,000	\$862,000	\$958,000
	crop	\$276,000	\$275,000	\$275,000	\$274,000	\$280,000	\$278,000
	fixed	\$140,000	\$140,000	\$140,000	\$140,000	\$140,000	\$140,000
	labour	\$88,000	\$91,000	\$92,000	\$106,000	\$88,000	\$88,000
	machinery	\$75,000	\$72,000	\$74,000	\$67,000	\$76,000	\$69,000
	pasture	\$37,000	\$37,000	\$37,000	\$37,000	\$40,000	\$40,000
	stock husb	\$130,000	\$129,000	\$129,000	\$127,000	\$129,000	\$127,000
	stock purchase	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000
	stock sup	\$33,000	\$91,000	\$114,000	\$330,000	\$64,000	\$170,000
<b>Total</b>	<b>EBITDA</b>	\$423,000	\$273,000	\$239,000	-\$205,000	\$334,000	\$0
	Depreciation	\$54,000	\$53,000	\$54,000	\$51,000	\$59,000	\$55,000
	Asset value change	\$45,000	-\$24,000	\$31,000	-\$7,000	\$16,000	-\$58,000
	<b>Profit</b>	\$414,000	\$197,000	\$216,000	-\$263,000	\$292,000	-\$113,000