

AN INITIATIVE OF

# Making More From Sheep



## Effective Integration of Livestock and Cropping

Simon Vogt – Rural Directions Pty Ltd



Rural  
Directions  
Pty Ltd

*It's ewe time!*



# 1. Background

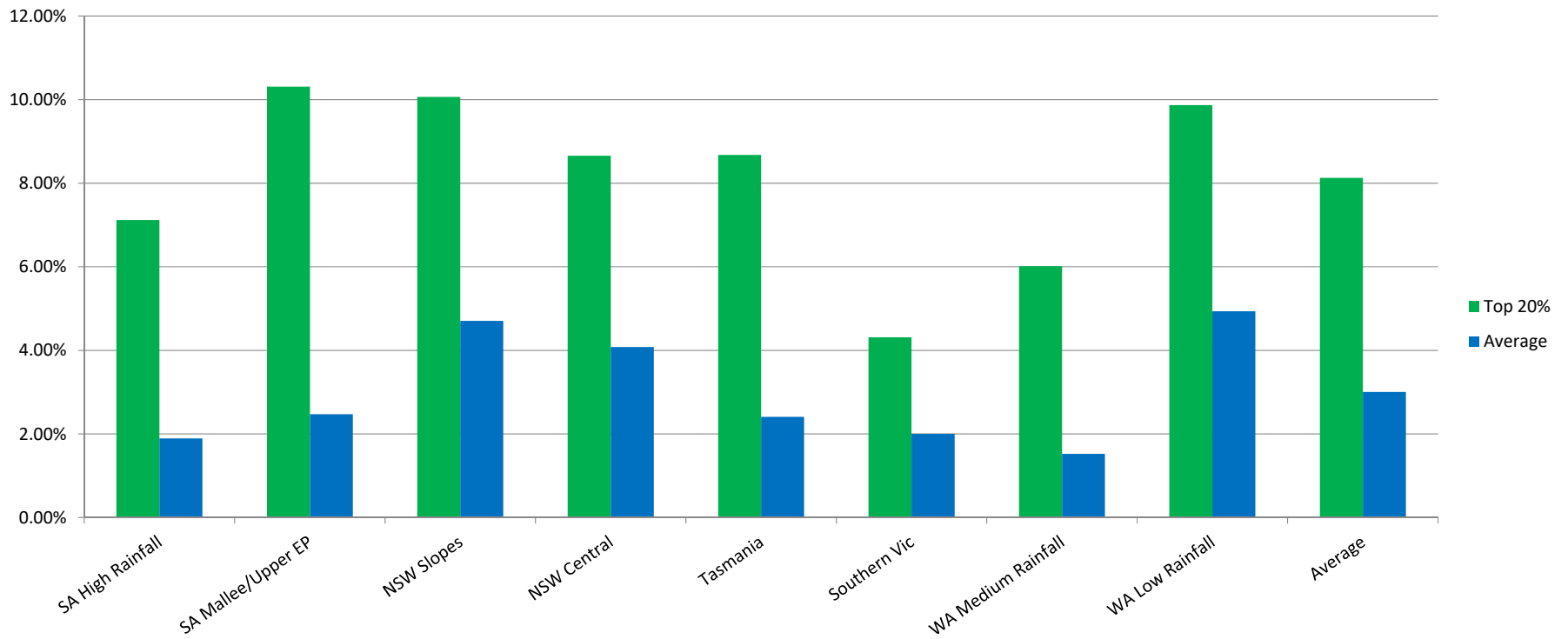
- MLA Profitable Integration of Cropping and Livestock project
- Collected and analysed 100 x multi-year benchmarking datasets across Southern Australia
- Project specifically targeting mixed enterprise (cropping and sheep)
- Goal was to identify the key profit drivers in mixed enterprise and understand what it takes to execute mixed enterprise really well
- Common production system in Southern Australia that is often promoted on the principle of diversification being beneficial

## Challenges with mixed enterprise

- Internal dilution of scale
- Duplication of capital
- Potentially creates enterprise conflict that will quietly erode margins in one or more enterprises
- Diversion of focus and management attention
- Compromises simplicity

# National comparison

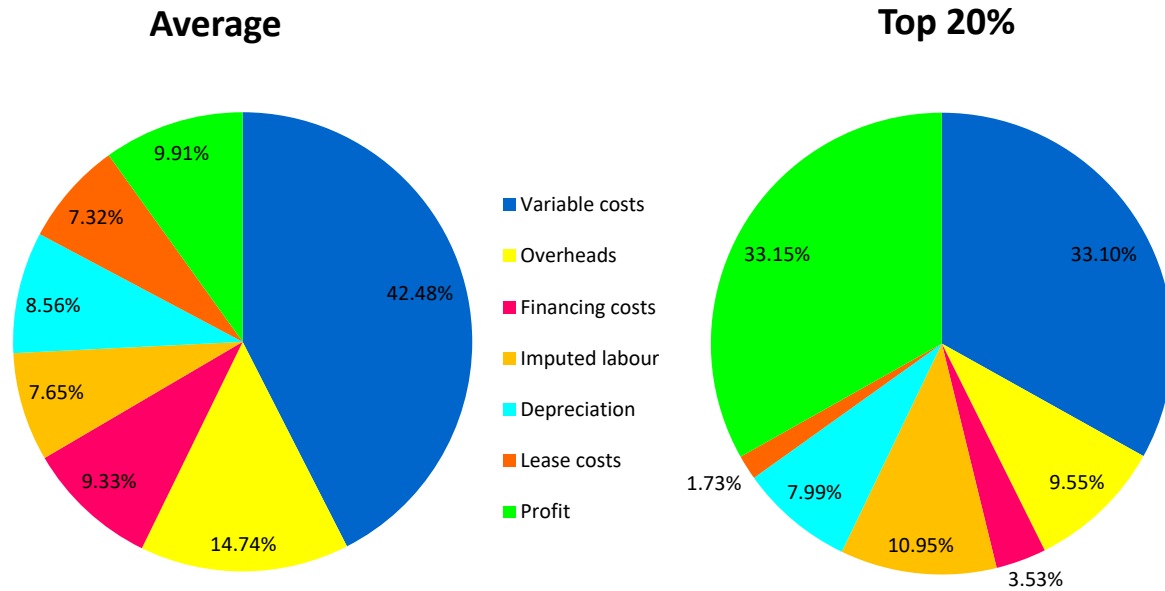
## Return on Equity (ROE)



## 2. The business case for mixed enterprise

- Making use of non-arable land classes
- Making beneficial use of a by product (bean stubbles)
- When livestock gross margins are stronger than alternative break crop choices
- Grain & Graze when season length allows
- Livestock enterprises representing highest and best land use
  - Frost prone landscapes
  - Soils prone to waterlogging or sodic soils
  - Paddocks with low arability (native vegetation, slope, soil depth)

# Mixed enterprise done really well...



Retaining 30% of turnover as net profit

**30%** (of turnover retained as net profit)

What are these  
businesses doing  
differently?

### 3. Profit Driver Framework

- The following four primary profit drivers have been identified nationally:
  1. Gross margin optimisation (*Operational*)
  2. Low cost business model (*Structural*)
  3. People and management
  4. Risk management
- It is the interaction of these four primary profit drivers that is resulting in different profit outcomes
- If one of these four is overlooked it will compromise profit potential and long term financial performance



## 4. Gross Margin Optimisation in mixed enterprise

### Key principles

1. Target superior gross margin performance in both your cropping and livestock enterprise
2. Aim to optimise crop yield in a cost effective manner
  - a) \$2.50 vs \$1.90 in crop revenue per \$1.00 invested into variable costs
3. Aim to optimise livestock income in a cost effective manner
  - a) \$3.40 vs \$1.95 in livestock revenue per \$1.00 invested into variable costs

## Gross margin optimisation – South West Slopes cropping

Benchmark indicator	Top 20%	Remaining 80%
Cropping income (\$/ha)	\$997	\$854
Cropping variable costs (\$/ha)	\$410	\$440
Cropping gross margin	\$587	\$414
Variable costs as a % of income	41%	54%
Fertiliser cost per tonne of wheat yield	\$33	\$41
Chemical cost per tonne of wheat yield	\$23	\$25
* 16% more crop yield		
* 42% stronger gross margin		

# Gross margin optimisation - cropping

Each of the four primary profit drivers are supported by a range of secondary and tertiary profit drivers

Behind gross margin optimisation in a cropping context are:

- Yield

- **Agronomy**
- **Timeliness**

- Variable cost control
- Crop rotation
- Crop sequencing
- Price received



# Gross margin optimisation - cropping

## Key indicators

1. Optimise crop revenue for your available rainfall
  - a. 10% more crop yield from enhanced timeliness
  
1. Keep cropping variable costs to less than 40% of cropping income
  
2. Strive to invest:
  - a. \$30 or less per tonne of wheat yield into N & P fertiliser
  - b. \$25 or less per tonne of wheat yield into chemicals



## Gross margin optimisation – South West Slopes livestock

Benchmark indicator	Top 20%	Remaining 80%
Livestock income (\$/ha)	\$643	\$637
Livestock variable costs (\$/ha)	\$191	\$237
Livestock gross margin	\$453	\$401
Variable costs as a % of income	32%	36%
Average turn-off weight (kg)	58	57
Adult fleece value	\$40	\$40
Supplementary feed (\$/ha)	\$24	\$39
Weaning % (industry estimates)	>100%	<90%

# Gross margin optimisation - livestock

Behind gross margin optimisation in a livestock context are:

- Turn-off weight
- Reproduction rate
- Adult fleece value
- Stocking rate
  - Grazing management
- Species composition
- Price received
- Supplementary feed

## Dual purpose flock targets

**120%** weaning

**\$120** per head minimum for lambs

**\$60** adult fleece value

## Maternal composite flock targets

**150%** weaning

**\$135** per head minimum for lambs

**\$15** adult fleece value



# Comparative gross margin performance

Long term crop yield	1.0t/ha	1.5t/ha	2.0t/ha
<b>Break crop type</b>			
Canola @ \$530/t	\$171	\$346	\$572
Canola @ \$530/t + Grazing	\$371	\$546	\$772
Sheep \$35/DSE + N	\$225	\$312	\$400
Sheep \$45/DSE + N	\$275	\$387	\$500
Sheep \$55/DSE + N	\$325	\$462	\$600
<b>Stocking rate/Ha</b>	<b>5.0 DSE</b>	<b>7.5 DSE</b>	<b>10.0 DSE</b>

## 5. Low Cost Business Model

### Key principles

1. Achieve high machinery and labour utilisation
2. Avoid unnecessary enterprise complexity
  - a) Complexity increases internal management risk



# Low cost business model – South West Slopes

Benchmark indicator	Top 20%	Remaining 80%
TPML as a % of income	26%	36%
Machinery investment to income ratio	0.6 : 1	1 : 1
Turnover per full time equivalent (FTE)	\$442,108	\$336,033

TPML = Total Plant Machinery & Labour

TPML includes: Contract work, Freight, Fuel, Plant Hire, Machinery Repairs and Maintenance, Wages and On-costs, Imputed Labour, Depreciation, and Machinery Finance costs

## Low cost business model - cropping

- **0.7 : 1.00** (machinery investment to income ratio)



## Low cost business model – mixed enterprise

- **>\$600k** (turnover per labour unit)
- **25% vs 35%** (of turnover into TPML costs)



## EBIT per DSE – South West Slopes

Benchmark indicator	Top 20%	Remaining 80%
Revenue (gross profit) per DSE	\$74	\$58
Variable costs per DSE	\$19	\$22
Gross margin per DSE	\$55	\$36
Overhead costs per DSE*	\$15	\$19
EBIT per DSE	\$40	\$17

EBIT = Earnings Before Interest & Tax

EBIT = Profit before finance and lease costs are taken out (& before tax)

\* = labour allocation based on revenue (imperfect approach)

## 6. The principle of simplification

- Greater focus
- Greater labour productivity
- Enhanced mind set and well being
- Less enterprise conflict
- Reduced internal management risk



## Many growers have **internal** capacity to increase profitability

- Improved crop rotation
- Simplifying enterprise mix
- Improved timeliness through systematised patterns of work
- Avoiding low margin crop choices
  - Highest and best land use
- 120 : 120 : 60 targets for livestock enterprise
- Block farming
- More accountable variable cost management
- Improved implementation
- Increased pasture harvest
- Disciplined approach to machinery and labour



## Best practice integration – key indicators

- Retaining 30% of turnover as net profit
- All fodder crops sown by the end of March
- Seeding consistently completed by 20th May
- Legume based pasture phase
- Adult fleece value > \$60
- Average turn-off weight > 48kg LWT
- Variable costs less than 40% of turnover
- TPML costs ideally at 25% of turnover
- Lambing percentage near 120%

## Summary of key messages

- Replicating Top 20% performance is **within your control**
- **Low risk, high margin** agriculture is possible!
- The **implementation** gap is bigger than the knowledge gap
- Replicating Top 20% performance requires **optimising gross margins** and developing a **low cost business model**
- It requires **skill, courage**, and **discipline** to achieve this!

## 7. Management traits and characteristics

The following six **management characteristics** were commonly noted amongst Top 20% producers during the qualitative survey process

1. Having a systems focus
2. Taking a 'helicopter' view when under pressure
3. Internalising and taking responsibility for key business decisions
4. Focusing energy on the things within their control
5. Superior implementation ability
6. Strong observational skills

## 8. Risk Management

- Developing a **resilient business**
- Developing an ability to withstand a production or business shock
- Risk identification and mitigation
- Prioritising management attention to risks based on impact
- **Low risk, high margin** agriculture
  - The Top 20% have stronger profit margins and lower risk profiles
- Managing seasonal variation
- Preparedness for drought
  - Stop : Go points
- Avoiding **internal management risk**

## Lamb growth rate – 40kg lambs

Daily Growth Rate (grams)	Maintenance Intake (kg/day)	Growth Intake (kg/day)	Total Intake (kg/day)	% diet going towards production
100	0.8	0.4	<b>1.2</b>	33%
150	0.8	0.6	<b>1.4</b>	43%
200	0.8	0.8	<b>1.6</b>	50%
250	0.8	1.0	<b>1.8</b>	55%
300	0.8	1.2	<b>2.0</b>	60%

Pasture Principles – A practical guide to pasture management  
Doonan B, Sherriff L, Hooper P, Macquarie Franklin