

Farm Gross Margin and Enterprise Planning Guide

2019



**A gross margin template for
crop and livestock enterprises**



GRDC™

GRAINS RESEARCH
& DEVELOPMENT
CORPORATION



Farming the Business

Sowing for your future

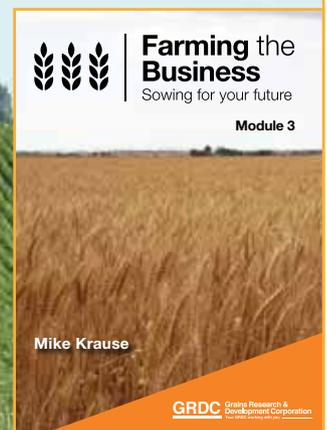
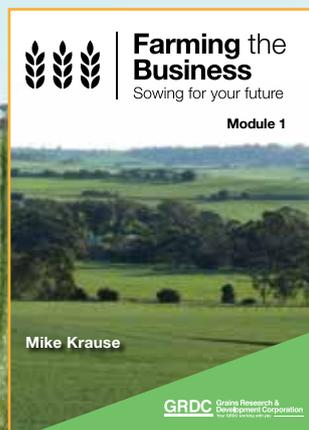
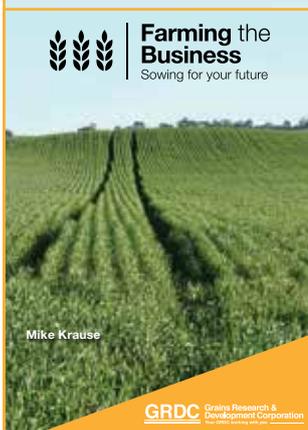
The GRDC's **Farming the Business** manual is for farmers and advisers to improve their farm business management skills.

It is segmented into three modules to address the following critical questions:

-  **Module 1:** What do I need to know about business to manage my farm business successfully?
-  **Module 2:** Where is my business now and where do I want it to be?
-  **Module 3:** How do I take my business to the next level?

The **Farming the Business** manual is available as:

- **Hard copy** – Freephone **1800 11 00 44** and quote Order Code: GRDC873
There is a postage and handling charge of \$10.00. Limited copies available.
- **PDF** – Downloadable from the GRDC website – www.grdc.com.au/FarmingTheBusiness
or
- **eBook** – Go to www.grdc.com.au/FarmingTheBusinessBook for the Apple iTunes bookstore, and download the three modules and sync the eBooks to your iPad.



Farm Gross Margin and Enterprise Planning Guide 2019

A gross margin template for crop and livestock enterprises

- Provides representative gross margins for all major extensive crop and livestock enterprises across South Australia
- Compares the sensitivity of profit of enterprises to a change in production and price
- Includes a comprehensive list of major cropping and livestock input costs

A Rural Solutions SA publication
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Published February 2019

Farm Gross Margin and Enterprise Planning Guide 2019

The South Australian Grains Industry Trust, in association with Primary Industries and Regions SA (PIRSA) and the South Australian Sheep Industry Fund (SIF) are pleased to produce this annual publication on expected Gross Margins for broadacre cropping and livestock enterprises in South Australia. It incorporates latest information on input and output pricing to give estimates of the relative profitability of different farm enterprises, as an aid to decision making in enterprise selection. With funding from SASIF, the livestock and pasture gross margins have been reviewed with three additional livestock and two pasture gross margins added.

Each year farmers are confronted with an array of challenges brought on by the vagaries of weather, production and marketing. In 2018, growing season rainfall was highly variable with very much below average rainfall in all agricultural districts except the South East, Southern Yorke Peninsula and Lower Eyre Peninsula. With below average summer rainfall there was limited opportunity to conserve soil moisture. Patchy and late opening rains, limited early crop growth in many districts. Average to above average rainfall in August gave some optimism, however extremely dry conditions with numerous frosts in September and early October, severely impacted yields in many districts. Large areas of crop were cut for hay, due to frost damage or drought. Livestock returns have generally remained strong, however the lack of pasture feed and the shortage of pasture and grain have impacted many enterprises.

There have been subtle but significant changes in crop diversity over the past decade. Traditionally, virtually all rotations in SA were cereal based, with wheat largely king. However, recently we have seen the emergence of the concept of wheat as a break crop to more valuable alternatives. Examples of this are canola on Lower Eyre Peninsula and lentils on Yorke Peninsula. Integral to this evolution has been the adoption of new and/or cheaper technologies such as herbicide tolerant varieties and cheaper fungicides.

This reclassification of alternative crops from 'break crops' to 'rotation crops' has come from continued evidence as to their profitability, even in lower rainfall districts.

Under this new regime, it has become even more critical to assess the potential profitability of alternatives when making enterprise selection decisions. Clearly, while this remains an area for individual decision making for each farm business, it is also clear that tightening margins are driving the need for a more robust examination of the risks and rewards of the various alternatives.

We believe that a healthy examination of gross margins of alternative enterprises is an effective tool in assisting with the process. To this end, we are pleased to be involved in the evolution of the Excel based version of the Farm Gross Margin Guide. This tool has all the normal practices for enterprises pre-loaded into an editable version which can be quickly and easily adjusted to represent individual farmer circumstance. This allows the incorporation of individuals own beliefs and judgements in producing their relevant numbers to aid decision making.

In farm business management, the focus is on getting the most from existing land and assets. The partners in this publication have important roles in this process. The South Australian Grain Industry Trust (SAGIT) provides local solutions to local problems, investing more than \$2 million each year in supporting SA centric grains research. Rural Solutions SA's purpose is to assist primary industries and regions to grow, innovate and maximise their economic growth potential. The South Australian Sheep Industry Fund (SIF) supports programs that deliver benefit to South Australia's sheep producers, investing over \$3 million in these programs in 2018-19.

This guide is one of few publications that provide gross margins for both crops and livestock enterprises across the range of South Australian rainfall zones.

The South Australian Grain Industry Trust has pleasure in partnering with PIRSA's Rural Solutions SA and the South Australian Sheep Industry Fund to produce and distribute this guide as a valuable aid in your decision making.

Sheep Industry Fund

The Sheep Industry Fund (SIF) is established by under the *Primary Industry Funding Schemes Act 1998*. All sheep owners in South Australia contribute 55 cents per head to the SIF when 5 or more sheep are sold for \$5 per head or more.

The SIF is invested in programs that deliver benefit to South Australian sheep producers. The South Australian Sheep Advisory Group (SASAG) advises the Minister in relation to the how the fund should be invested. Current investment priorities include:

- Animal health, surveillance and traceability
- Predator control
- Industry advocacy
- Communications
- Skills development

More information about the SIF can be found at www.pir.sa.gov.au/sheep-industry-fund



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IMPORTANT NOTE: An editable Excel version of this guide has been produced which allows easy adjustments of these Gross Margins to individual circumstances. Please visit the SAGIT, GRDC or PIRSA websites to download the Excel version.



Soil pH and EC Mapping Technology

Mapping your soil pH variation across paddocks can help you reduce liming costs of acid soils and improve production.

The Veris pH and EC (electrical conductivity) mapping machine, operated by an experienced Rural Solutions SA soil consultant, can measure and map the spatial variation of pH and EC on your farm. Soil pH mapping can identify where lime is needed and EC mapping can indicate sub-soil constraints.

Mapping starts at \$15/hectare plus travel costs to and from the site.

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Introduction

"The key task of farm management is making choices between alternatives. Farm management analysis is about analysing those choices (and) encompasses considering alternative actions under risky and uncertain circumstances." Malcolm, B., Makeham, J. and Wright, V. 2005, 'The Farming Game', Cambridge University Press.

The choice of enterprises within a farm system remains a complex decision with a range of possible scenarios. There is generally no best bet system - differences in climate, soil type, market access, labour and management all contribute to the need for land managers to negotiate a system which fits their individual needs. A general outcome being sought from the farming system is profit maximisation at an acceptable level of risk.

The gross margin for a farm enterprise is one measure of profitability that is a useful aid to enterprise planning. The calculation of gross margins can be the starting point for construction of cash flow budgets and assessment of whole farm profitability. They can also be used to assist in assessing the opportunity to develop new farm enterprises.

What are Gross Margins?

Gross margin profit is the difference between the annual gross income for that enterprise and the variable costs directly associated with the enterprise.

In constructing gross margins, fixed (overhead) costs are ignored, as it is considered that they will be incurred regardless of the level of the enterprise undertaken.

The gross margin of different enterprises should not be compared if they have different overhead costs.

The direct comparison of gross margins is most useful when the various alternatives fit into the same part of the rotation e.g. the cereal or legume phase. The gross margins in this booklet have been grouped on this basis.

The base gross margins included in this book should be adjusted as required for commodity prices, yield, input costs and input items. These items vary considerably between different locations and different farm businesses.

- **Compare the relative profitability** of current farm enterprises, paddocks or rotations
- **Estimate changes in** enterprise profit caused by changes in price, cost or yields
- **Pinpoint high cost or low income** areas in the existing farm plan
- **Evaluate the profitability** of a re-organisation of the farm enterprise mix

Treatment of machinery - It is assumed that most machinery items (tractors, seeders, sprayers, harvesters etc.) are owned by the farm business. In each gross margin in this guide, the operating costs (fuel and repairs) have been included based on the number of machinery passes specified. *No allowance is included in the gross margin for machinery ownership costs such as depreciation or opportunity cost of capital.* When calculating enterprise profitability, these ownership costs need to be included. An alternative is to include all machinery costs at full contract rates.

Limitations of Gross Margins

The gross margins prepared within this publication have been designed to represent 'average case scenarios' within the respective rainfall zones of South Australia. They should be treated strictly as a **base guide only** and adapted by users for their particular situations.

Gross margins are best used to compare enterprises that make use of the same resources on the property. They cannot be used where varying capital input is needed for an enterprise. Cropping and livestock gross margins can only be compared if all capital resources are already on the property.

Estimates of inputs and production can vary from what actually occurs. Although a crop might have the highest gross margin, it might be the most sensitive to variation. Commodity prices, seasonal conditions, pests and disease can significantly affect the eventual gross margin. Risk can be assessed by comparing gross margins calculated with varying values for an input.

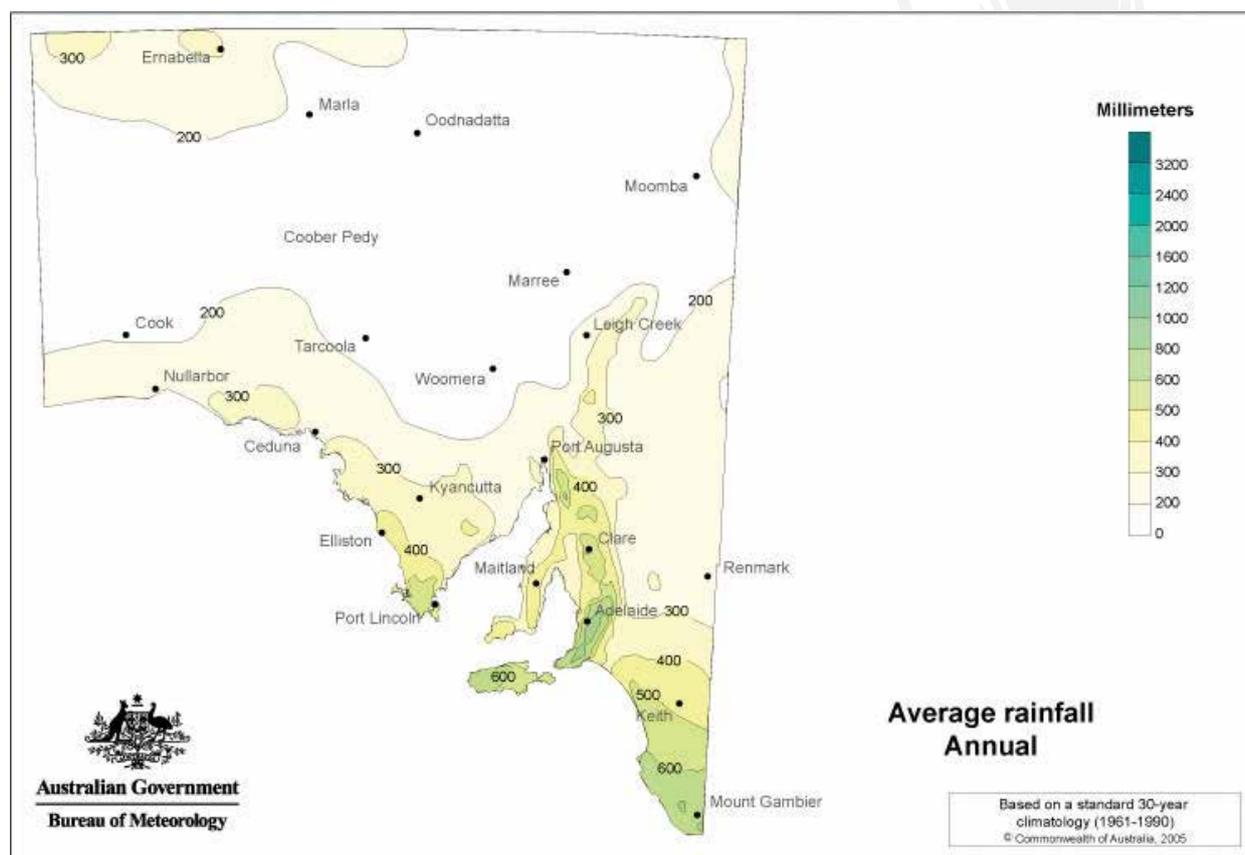
Sensitivity analysis tables are included in the guide to help determine the impact on the gross margin of significant changes in yield and price. These tables assume input costs remain the same, however generally these will vary with changes in yield.

Agronomic information including chemical rates are provided as a guide only and exact agronomic recommendations will vary with location, soil type and a number of other factors.

Gross margins have been broadly delineated into production zones based on rainfall. Average annual rainfall zones have been classified as '*Low Rainfall*' (<350 mm), '*Medium Rainfall*' (350–400mm) and '*High Rainfall*' (>400mm).

KEY POINT

Make your own adjustments to the gross margins in this book using the Excel editable version



Using Gross Margins for Farm Planning

Gross margins are just one component of a whole range of factors which go into enterprise selection for paddocks and zones on a farming property. There are other core characteristics of farming systems which potentially contribute to success over time. These include:

1. Appropriate level of income diversification

Virtually all cropping systems in South Australia involve some level of diversification. The traditional approach has been to include livestock although most farm systems in more favoured cropping locations have reduced or even removed livestock from the system. These areas tend to have a more diversified range of crop options than lower rainfall systems.

2. Adoption of right rotations, along with attention to detail

“Right rotations pay - they don’t cost”. This catch cry from the Right Rotations initiative in the 1980’s continues to be relevant. Appropriate crop sequencing involves decisions around weed, disease and nutrition implications along with other considerations such as herbicide residues, carry-over of water from previous crops etc. There is also no substitute for good agronomy and/or livestock husbandry.

3. Understanding and acknowledging comparative advantage

This applies both to the business location and the technical and personal characteristics of business managers. Some crops are just not suitable to be grown in certain areas, and some people just should not run livestock! Understanding and working with variations in land capability across farms is important.

4. Meeting market requirements

Our mixed farming systems in SA have traditionally produced grain and livestock products which generally have had good demand and acceptance on world markets. The caveat here is that even though market acceptance is good, difficulties can arise when supply and demand get out of balance resulting in poor prices which test farm business profitability.

Gross margins on their own do not make the decision on enterprise selection across the property. Each activity undertaken on a farming property will have an impact on other activities:

- Some may be complimentary such as cropping enterprises which provide a feed base to livestock through crop residues
- Crops planted in one year will have a rotational effect on subsequent crops (both positive (e.g. cereals on legumes) and negative (e.g. canola on canola))

For more information on the use of gross margin analysis, refer to the following GRDC publications:

Farm Financial Tool- Crop Gross Margin Budget

www.grdc.com.au/GRDC-FS-FFT-CropGrossMarginBudget

Farm Financial Tool- Livestock Gross Margin Budget

www.grdc.com.au/GRDC-FS-FFT-LivestockGrossMarginBudget

Calculating Your Own Gross Margins

The gross margins in this guide are designed to **provide a template only**, for users to adapt to their own situation, and should not be relied upon as representative of any one particular situation.

The gross margins shown in this publication are designed to represent a fair estimate of returns available from cropping and livestock enterprises across the cropping regions of South Australia using good management practices. However, clearly, expected outputs along with inputs (e.g. rates and types of fertiliser and weed control treatments) will vary depending on individual circumstances.

An Excel based editable version of the gross margins shown in this guide is available for download from the following websites:

www.grdc.com.au/FarmGrossMarginGuide

www.pir.sa.gov.au/consultancy/farm_gross_margins_and_enterprise_planning_guide

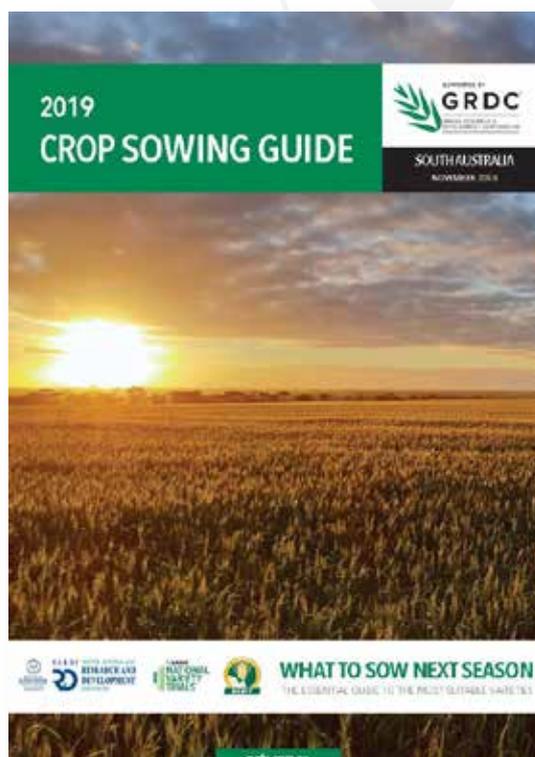
www.sagit.com.au/publications/

Using the Excel version allows for easy adjustments of the pre-loaded information. Remember that these calculations are not meant to be an exact science - **roughly right is better than precisely wrong!** Use your own estimates when the values vary significantly from those included in the example.

Calculating the break-even yield needed to cover variable costs will give some indication of the riskiness or exposure of the particular enterprise. Remember, of course, that there are many other costs (in addition to the variable costs) which need to be covered before a profit is made. Such costs include overhead costs, depreciation, interest and labour and management. Reference to the sensitivity tables will provide further information on how the returns from the enterprise are expected to respond to a range of prices and yields.

2019 South Australian Crop Sowing Guide

This guide, compiled by officers from SARDI and sponsored by SAGIT, PIRSA and GRDC provides information on appropriate varietal selection to maximise production and profitability from broadacre cropping and should be read in conjunction with this Farm Gross Margin Guide.



Strategies for Maximising Returns from Individual Enterprises

This Gross Margins Guide aims to cover all broadacre cropping and grazing areas in South Australia. Circumstances obviously vary significantly across different regions. However, there are some rules of thumb and other resources which can provide guidance on decision making to aid in maximising returns from individual enterprises.

A national benchmarking study found that the superior profitability achieved by the Top 20% of producers is a function of four primary profit drivers:

1. **gross margin optimisation,**
2. **developing a low cost business model,**
3. **people and management and**
4. **risk management**

It is the interaction of these that results in very different profit outcomes and if one of these is overlooked it will compromise long term profit potential at some point.

Key cropping enterprise profit drivers:

1. **Operational timeliness**
 - Across the full calendar year for all operations
 - This will leverages 10% to 15% more yield
2. **Agronomy**
 - Robust crop rotation and crop management
 - A disciplined approach to variable costs (less than 40% of turnover)
3. **Machinery utilisation**
 - 0.7 : 1 Machinery Investment : Income ratio or lower
4. **Labour utilisation**
 - Greater than \$600,000 turnover per full time equivalent (FTE)

Storage of Out of Season Soil Water

Provides the opportunity to significantly improve Water Use Efficiency and hence crop performance. The key to effective storage of soil moisture over the summer period is to get the soil water deep in the soil profile, below the zone subject to evaporation and then retain soil moisture through to seeding by control of summer weeds. Below average spring and/or summer rainfall will limit the opportunity to store soil moisture.

Lighter Mallee type soils

- Rainfall events above 40mm in December/January should result in some stored moisture with summer weed control
- Less than 40mm rainfall events may still warrant summer weed control for ease of seeding operations and nutrient retention (mainly N)
- There is a strong case to apply zero tolerance summer weed control policy on light soils with no sub-soil limitations

Heavier soils

- May require larger rainfall events (up to 100mm) in December/January to store soil moisture if soils are already very dry
- Smaller rainfall events from February onwards will warrant control of germinated weeds
- Control of summer weeds earlier than February may also be dependent on other considerations e.g. improved ease of sowing, low cost of control, nutrient retention

Maximising Time of Sowing Benefits

Early seeding generally provides the most reliable yield outcome, particularly in low rainfall situations. However, frost prone areas have special considerations which need to be taken into account.

Sowing Opportunity with Early Break

Frost Risk	Start Sowing
Low	After mid April
Medium	After 25th April
High	After early May

- Sow at the optimum time, even in high frost risk areas. Use appropriate varieties to manage flowering time
- The yield loss from moisture and temperature stress during spring will usually be far greater than the damage caused by frost
- The most severe and damaging frosts are those associated with dry conditions in mid to late spring (black frosts), which can be devastating even to crops that have completed flowering

Ensuring Efficient Fertiliser Practices

For more information on Better Fertiliser Decisions refer to the following GRDC factsheet, www.grdc.com.au/GRDC-FS-BFDCN

Aim to maintain soil nutrient status at appropriate levels to maximise sustainable and profitable production.

Phosphorous Replacement Levels

Crop	Removal	Removal plus losses #
Cereal grain	3 kg/t	4 kg/t
Pulses	4 kg/t	5 kg/t
Canola	7 kg/t	8 kg/t
Cereal hay	2 kg/t	2.5 kg/t

higher rates may be required on calcareous / ironstone soils or those with moderate to low available P.

Reduce P application on soils with sub soil constrains when:

- Moderate to low stored soil moisture
- And crop sown more than 3 weeks after the optimum sowing date.

N Fertiliser

Wide range of soil types, rotational histories and climatic conditions means that Nitrogen requirements of crops will vary considerably. Assess opening N supply (e.g. by using deep soil sampling) and then monitor yield and N requirements through models such as **Yield Prophet®** or the CSIRO developed **Yield and N Calculator**.

Refer www.yieldprophet.com.au

Micronutrients and trace elements

Micronutrient deficiencies can be tricky to diagnose and treat. By knowing your soil type, considering crop requirements and the season, and supporting this knowledge with diagnostic tools and strategies, effective management is possible.

Refer www.grdc.com.au/GRDC-FS-CropNutrition-Micronutrients

PestFacts

PestFacts is a FREE electronic newsletter service, produced by SARDI, designed to keep growers and advisers informed about invertebrate pest-related issues and solutions as they emerge during the growing season. PestFacts issues warnings (or reminders) for a range of invertebrate pests of all broad-acre crops including pulses, oilseeds, cereals and fodder crops.

Refer www.pir.sa.gov.au/research/services/reports_and_newsletters/pestfacts_newsletter

Livestock

The following indicators are useful to measure the productivity and efficiency of your livestock enterprises over time or against similar businesses.

Key Livestock profit drivers

1. Sheep productivity

- > 5kg clean wool/ ha/100mm rainfall = strong
- > 15kg lamb dwt/ha/100mm rainfall

2. Cost of production

- \$ per kg clean wool
- \$ per kg lamb dwt
- \$ per kg beef dwt

3. Stocking rate

- In areas with more than 350mm rainfall the use of improved pasture species and fertilisation
- > 1.5 DSE's/ ha/100mm rainfall = strong for wool
- > 2 DSE's/ha/100mm rainfall = strong for prime lambs

4. Fertility and lamb/calf survival (weaning percentage)

5. Labour productivity (DSE/labour unit)

SheepConnect SA

'connecting people in the business of sheep'

Supporting the development of the SA Sheep Industry by providing timely, technical information to assist in on-farm management decisions, supporting activities that address issues that impact on your sheep business, and collaborating with other industry programs and service providers.

Website: www.sheepconnectsa.com.au
Twitter: @SheepConnectSA
YouTube Channel: <https://bit.ly/2zl4idH>



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SheepConnect SA is a partnership between Australian Wool Innovation Limited, Primary Industries and Regions SA and the SA Sheep Industry Fund.



DROUGHT SUPPORT



**We're
here
to help**

South Australia's Family and Business (FaB) Support Program is here to help farmers, farming families and regional businesses in drought affected communities.

Each FaB mentor is experienced in dealing with the difficult issues that come about as a result of drought and other adverse events.

They work closely with other service providers such as Rural Financial Counselling and local health networks and can connect you to those services as required.

They can also help make the connection between drought assistance and other support measures currently available

Get in touch, and arrange a chat or visit with a FaB mentor at:

Email: pirsa.recovery@sa.gov.au

Drought Hotline: **1300 364 322**

Go to pir.sa.gov.au/drought for individual mentor contacts and more information about other drought support and assistance available.

through government, non-government and community organisations and donations.

The FaB Mentor program provides a free, informal, confidential, independent and understanding approach available for individuals, families or businesses in South Australia who may be affected by drought.

2019 Gross Margin Estimates

The tables below summarise the anticipated gross margins for all crops and livestock for 2019.

CROPPING			
Commodity \$/ha	Low	Medium	High
APW Wheat	289	476	724
Durum	203	459	753
Malt Barley	261	467	769
Feed Barley	182	327	558
Milling Oats	226	501	736
Triticale	131	302	472
Oaten Hay	360	576	668
Grain Vetch	234	540	842
Lupins	160	378	588
Lentils	284	667	1,039
Lentils- Imi Tolerant	223	564	881
Field Peas	177	420	659
Faba Beans	178	532	1,117
Chickpeas (Kabuli)	234	445	704
Canola- Conv	130	302	562
Canola-TT	66	195	460
Canola-Clear	94	235	494
Sown Pasture	214	426	606
Self Regen Pasture	257	468	651
Lucerne Pasture		344	529
Phalaris sub clover Pasture			664

LIVESTOCK			
Enterprise \$/dse	Pastoral Zone	Cereal Zone	High R/F Zone
Prime Lambs	46	72	53
Merino breeders	62	79	76
Merino wethers	39	52	55
Cleanskin		63	
Beef Cattle	12	20	23
Beef Trading			10.70
Beef Feed Lot		16	

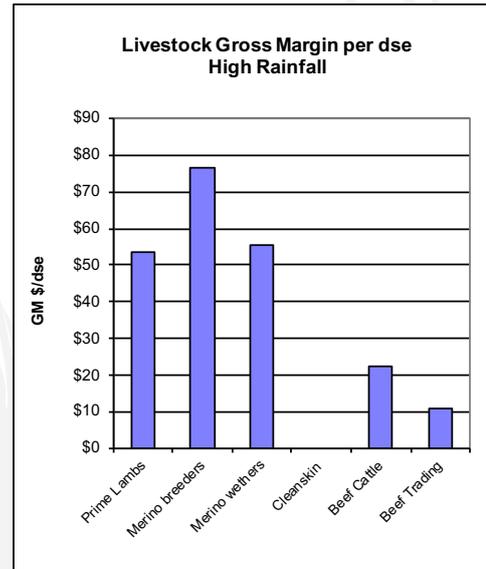
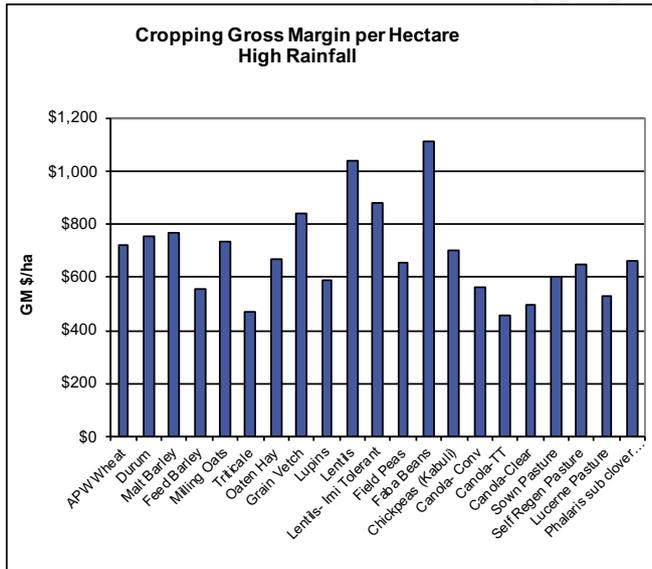
Commodity Prices Historical Data

Historical commodity price data and trends can be used as a guide in assessing average returns over time and also the variability of those returns for any given commodity.

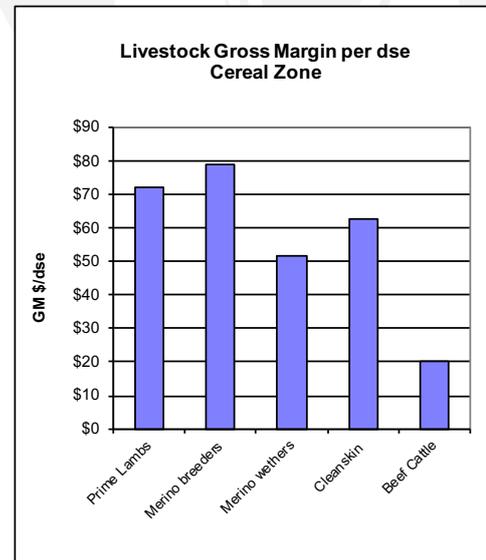
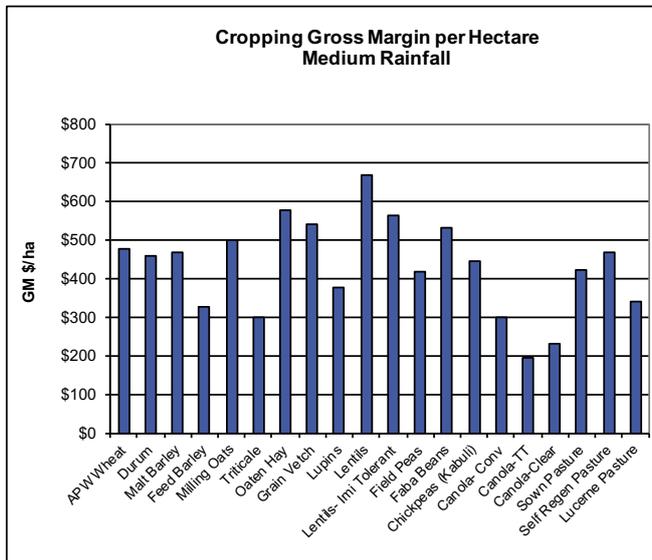
NOTE: 19/20 Forecast Grain Prices: Forecast grain prices for 19/20 are affected by the value of the Australian Dollar, world consumption, and Australian and other major grain exporting countries production. Future pricing is uncertain and caution is needed with projections.

Commodity pricing in the following table is on delivered end-user basis- e.g. Grain is delivered port basis (Adelaide).

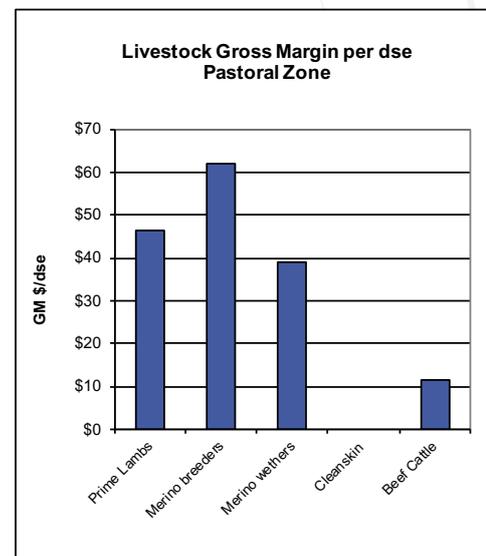
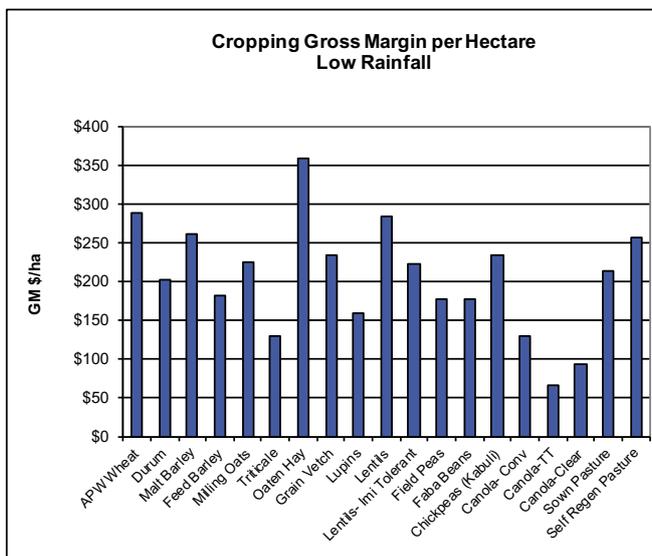
Commodity	Jan 2015	Jan 2016	Jan 2017	Jan 2018	Jan 2019	5 yr Average	2019 Estimate
APW Wheat (\$/t)	290	250	220	240	390	278	300
Durum (\$/t)	550	370	305	310	397	386	320
Malt Barley (\$/t)	320	290	200	288	360	292	300
Feed Barley (\$/t)	270	205	160	225	330	238	250
Milling Oats (\$/t)	240	290	170	200	600	300	300
Feed Oats (\$/t)	230	275	150	180	500	267	280
Triticale (\$/t)	240	210	180	220	315	233	240
Grain Vetch (\$/t)	650	850	300	350	700	570	550
Lupins (\$/t)	335	380	230	270	550	353	400
Lentils (\$/t)	940	1340	680	420	600	796	600
Field Peas (\$/t)	400	550	350	285	640	445	450
Faba Beans (\$/t)	490	560	270	315	900	507	600
Chickpeas 6-8mm Kabuli (\$/t)	530	1050	1450	900	730	932	750
Canola (\$/t)	480	530	520	480	550	512	530
Oaten Hay (\$/t)	160	170	170	170	340	202	250



Comparative returns between farm enterprises – High Rainfall



Comparative returns between farm enterprises – Medium Rainfall



Comparative returns between farm enterprises – Low Rainfall

GROSS MARGIN SENSITIVITY LOW RAINFALL

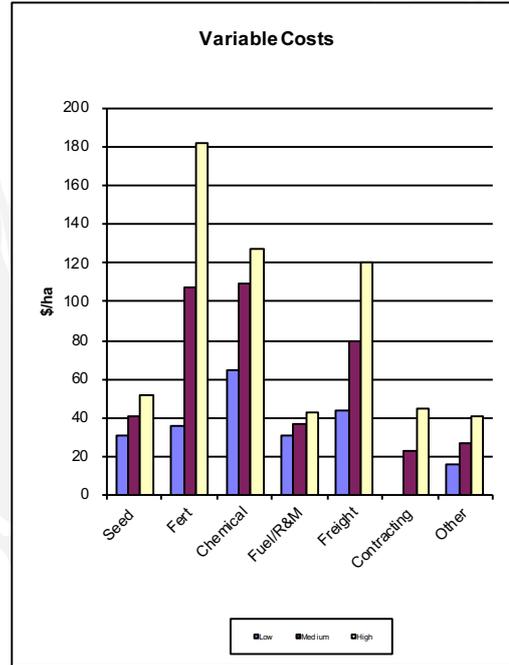
		Cash Price \$/t				
		\$250	\$275	\$300	\$325	\$350
Yield t/ha	0.5	-\$55	-\$42	-\$30	-\$18	-\$5
	1.2	\$97	\$127	\$156	\$186	\$215
	1.7	\$206	\$247	\$289	\$331	\$373
	2.5	\$379	\$441	\$502	\$563	\$625
	3.5	\$596	\$682	\$768	\$854	\$940

MEDIUM RAINFALL

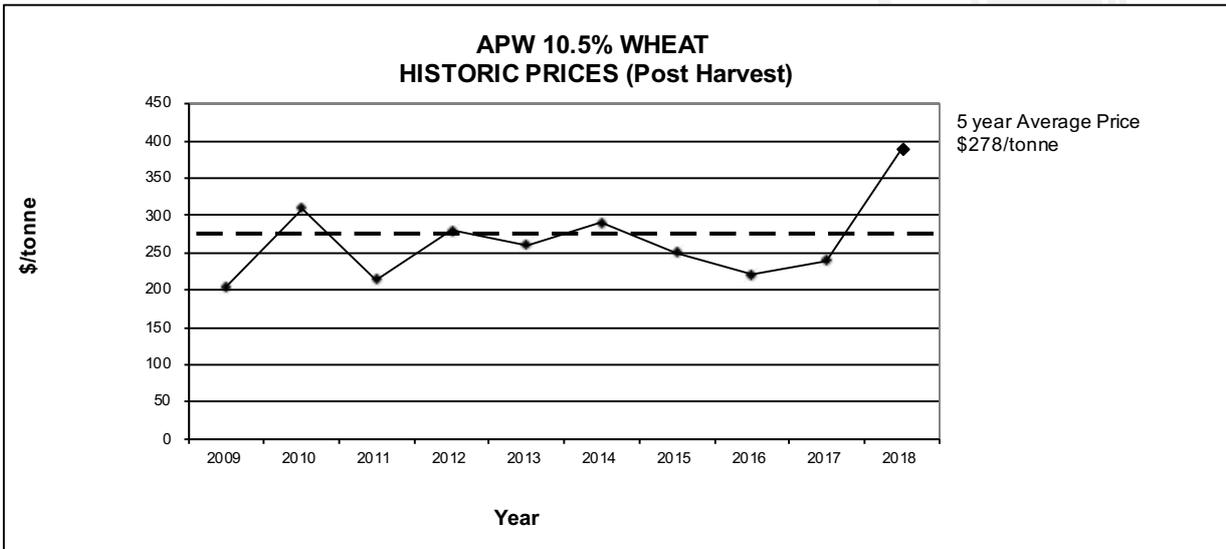
		Cash Price \$/t				
		\$250	\$275	\$300	\$325	\$350
Yield t/ha	1	-\$105	-\$80	-\$56	-\$31	-\$6
	2	\$112	\$161	\$210	\$259	\$309
	3	\$329	\$403	\$476	\$550	\$624
	4	\$546	\$644	\$742	\$840	\$939
	5	\$763	\$886	\$1,008	\$1,131	\$1,254

HIGH RAINFALL

		Cash Price \$/t				
		\$250	\$275	\$300	\$325	\$350
Yield t/ha	2.5	\$70	\$131	\$192	\$254	\$315
	3.5	\$287	\$373	\$458	\$544	\$630
	4.5	\$504	\$614	\$724	\$835	\$945
	5.5	\$720	\$855	\$990	\$1,125	\$1,260
	6.5	\$937	\$1,097	\$1,256	\$1,416	\$1,575



HISTORIC PRICES AND TRENDS



Machinery Costs - Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	6	3.50	2.58
harvest#	1	9.29	6.14
TOTAL		16.92	13.82

Rates are for low rainfall zone. Extra cost in higher yielding situations

										2019 YOUR ESTIMATE	
INCOME											
				<i>Rainfall Zone</i>							
				LOW			MEDIUM			HIGH	
Price (19/20 Forecast)				\$320			\$320			\$320	
Quality Durum 13%											
Yield (t/ha)				1.4			2.7			4	
GROSS INCOME				\$448			\$864			\$1,280	
VARIABLE COSTS											
				Rate/ha			Rate/ha			Rate/ha	
Cost				Low			Medium			High	
							\$/ha			\$/ha	
Seed											
Seed	\$0.40 /kg	@	80	\$31.76	90	\$35.73	110	\$43.67			
Seed Treatment(1)	\$0.04 /kg	@	80	\$3.27	90	\$3.68	110	\$4.49			
Seed Treatment(2)	\$8.39 /100kg	@	80	\$6.71	90	\$7.55	110	\$9.23			
Levies											
GRDC Levies	1.0% Gross Income			\$4.48		\$8.64		\$12.80			
EPR & state levies	\$3.50 /tonne sold			\$4.90		\$9.45		\$14.00			
Fertiliser (Bulk)											
Granulock Z	\$755 /tonne	@	45	\$33.98	70	\$52.85	100	\$75.50			
Urea	\$540 /tonne	@	50	\$27.00	150	\$81.00	200	\$108.00			
Chemicals-Herbicides											
Summer Weed Control	Various Allow			\$25.00		\$25.00		\$25.00			
Trifluralin 480g/L	\$5.24 /litre	@	1	\$5.24		\$0.00		\$0.00			
Tri-allate 500g/L	\$8.86 /litre	@	1.6	\$14.18		\$0.00		\$0.00			
Boxer Gold	\$10.92 /litre	@		\$0.00	2.5	\$27.30	2.5	\$27.30			
Glyphosate 540	\$6.30 /litre	@	1.2	\$7.56	1.2	\$7.56	1.2	\$7.56			
Carfentrazone 400g/L	\$166.00 /litre	@	0.02	\$3.32	0.02	\$3.32	0.02	\$3.32			
Post-emergents											
MCPALVE	\$8.13 /litre	@	0.5	\$4.07	0.5	\$4.07	0.5	\$4.07			
Clopyralid 600g/L	\$38.28 /litre	@	0.04	\$1.94		\$0.00		\$0.00			
Paradigm® (3)	\$0.50 /gm	@		\$0.00	25	\$14.83	25	\$14.83			
Metsulfuron methyl(3)	\$0.06 /gm	@	5	\$0.71		\$0.00		\$0.00			
Operations											
Fuel & Oil				\$13.39		\$16.07		\$18.74			
Repairs & Maintenance				\$16.34		\$19.60		\$22.87			
Freight											
Grain (t)	\$25.00 /tonne	@	1.4	\$35.00	2.7	\$67.50	4.0	\$100.00			
Fertiliser (t)	\$25.00 /tonne	@	0.10	\$2.38	0.22	\$5.50	0.30	\$7.50			
Contract Work											
Aerial spraying	\$14.00 /ha	@		\$0.00		\$0.00		\$0.00			
Urea spreading	\$8.50 /ha	@		\$0.00	1	\$8.50	2	\$17.00			
Insurance	\$8.50 /\$1000	@		\$3.81		\$7.34		\$10.88			
Other											
TOTAL VARIABLE COSTS				\$245			\$405			\$527	
GROSS MARGIN/hectare				\$203			\$459			\$753	
Break Even Price (to cover variable costs only)				\$175			\$150			\$132	
Break Even Yield (to cover variable costs only)				0.77			1.27			1.65	
Gross Margin based on last 5 year average price				\$296			\$638			\$1,019	

COMMENTS

Assumes durum follows a legume crop or pasture.

Price assumes Durum 13% is achieved

(1) Smuts and Bunts

(2) Aphid Control

(3) Includes surfactant and/or oil

AGRONOMIC NOTES

Some Durum varieties have a narrow safety margin with broadleaf herbicides. Seek advice. The effect is worse when the crop is under stress.

GROSS MARGIN SENSITIVITY

LOW RAINFALL

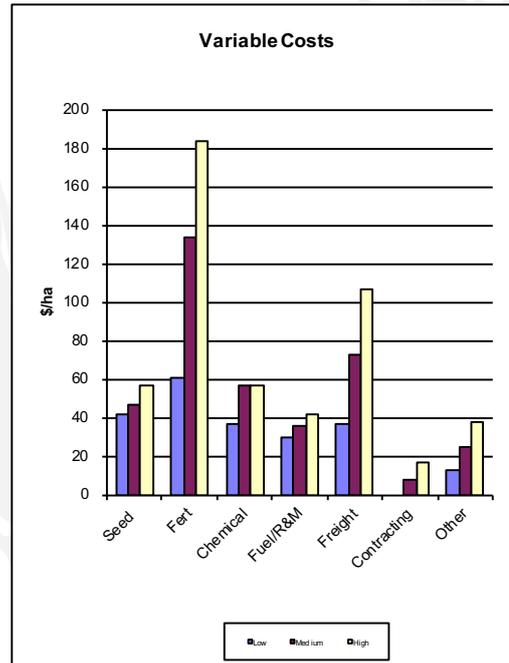
		Net Price \$/t				
		\$240	\$280	\$320	\$360	\$400
Yield t/ha	0.8	-\$31	\$0	\$32	\$63	\$94
	1.4	\$93	\$148	\$203	\$258	\$313
	2	\$217	\$296	\$374	\$453	\$531
	2.8	\$383	\$493	\$603	\$713	\$823

MEDIUM RAINFALL

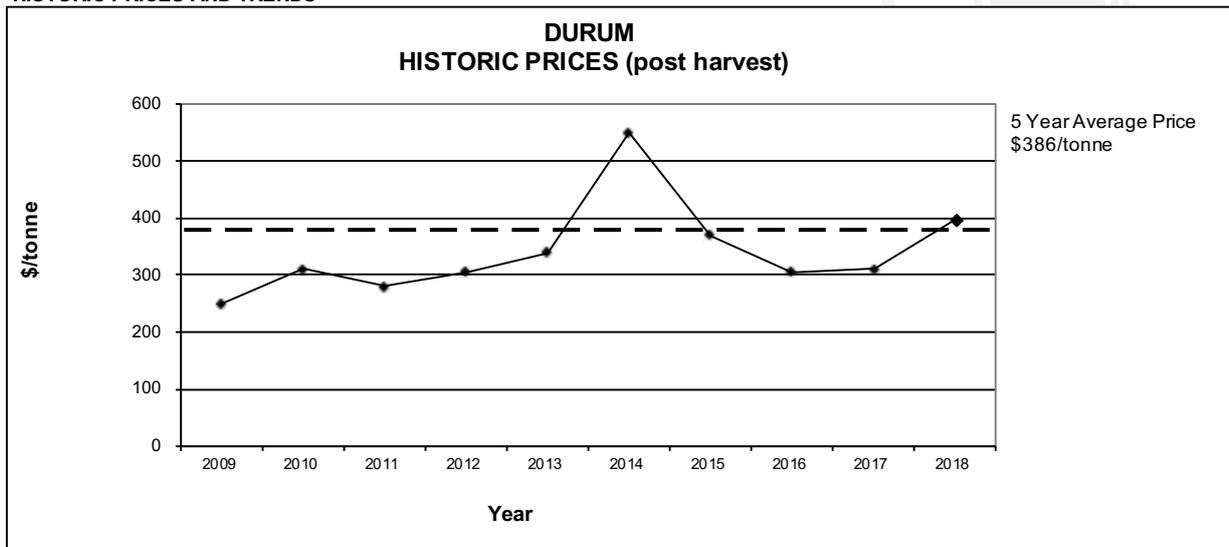
		Net Price \$/t				
		\$240	\$280	\$320	\$360	\$400
Yield t/ha	1.5	-\$2	\$57	\$116	\$175	\$234
	2.7	\$247	\$353	\$459	\$565	\$671
	3.5	\$412	\$550	\$687	\$824	\$962
	4.5	\$619	\$796	\$973	\$1,149	\$1,326

HIGH RAINFALL

		Net Price \$/t				
		\$240	\$280	\$320	\$360	\$400
Yield t/ha	2	\$25	\$104	\$182	\$261	\$339
	3	\$232	\$350	\$468	\$585	\$703
	4	\$439	\$596	\$753	\$910	\$1,067
	6	\$853	\$1,089	\$1,324	\$1,560	\$1,796



HISTORIC PRICES AND TRENDS



Machinery Costs - Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	5	2.92	2.15
harvest#	1	9.29	6.14
TOTAL		16.34	13.39

Rates are for low rainfall zone. Extra cost in higher yielding situations

Malting Barley

										2019 YOUR ESTIMATE		
INCOME												
Rainfall Zone												
LOW										MEDIUM	HIGH	
Price (19/20 Forecast)										\$300	\$300	\$300
Quality Malting												
Yield (t/ha)										1.7	3	4.5
GROSS INCOME										\$510	\$900	\$1,350
VARIABLE COSTS												
Cost										Rate/ha Low	Rate/ha Medium	Rate/ha High
										\$/ha	\$/ha	\$/ha
Seed												
Seed	\$0.36 /kg	@	60	\$21.60	75	\$27.00	80	\$28.80				
Seed Treatment(1)	\$0.04 /kg	@	60	\$2.45								
Seed Treatment(2)	\$0.34 /kg	@	0	\$0.00	75	\$25.54	80	\$27.24				
Seed Treatment(3)	\$8.39 /100kg	@	60	\$5.03	75	\$6.29	80	\$6.71				
Levies												
GRDC Levies	1.0% Gross Income			\$5.10		\$9.00		\$13.50				
EPR & state levies	\$4.30 /tonne sold			\$7.31		\$12.90		\$19.35				
Fertiliser (Bulk)												
18:20:0	\$685 /tonne	@	45	\$30.83	70	\$47.95	100	\$68.50				
Urea	\$540 /tonne	@	50	\$27.00	100	\$54.00	200	\$108.00				
Chemicals-Herbicides												
Summer Weed Control	Various Allow			\$25.00		\$25.00		\$25.00				
Pre-emergents												
Trifluralin 480g/L	\$5.24 /litre	@	1.5	\$7.86								
Tri-allate 500g/L	\$8.86 /litre	@	1.6	\$14.18								
Glyphosate 540	\$6.30 /litre	@	1.2	\$7.56	1.2	\$7.56	1.2	\$7.56				
Carfentrazone 400g/L	\$166.00 /litre	@	0.02	\$3.32	0.02	\$3.32	0.02	\$3.32				
Boxer Gold	\$10.92 /litre	@			2.5	\$27.30	2.5	\$27.30				
Post-emergents												
M.C.P.A. LVE	\$8.13 /litre	@	0.5	\$4.07	0.5	\$4.07	0.5	\$4.07				
Metsulfuron methyl(4)	\$0.06 /gm	@	5	\$0.71								
Clopyralid 600g/L	\$38.28 /kg	@	0.04	\$1.53								
Paradigm® (4)	\$0.50 /gm	@			25	\$14.83	25	\$14.83				
Fungicides												
Cogito	\$27.00 /litre	@	0.25	\$6.75	0.25	\$6.75	0.25	\$6.75				
Amistar®	\$41.20 /litre	@			0.4	\$16.48	0.4	\$16.48				
Operations												
Fuel & Oil				\$13.39		\$16.07		\$18.74				
Repairs & Maintenance				\$16.34		\$19.60		\$22.87				
Freight												
Grain (t)	\$25.00 /tonne	@	1.7	\$42.50	3.0	\$75.00	4.5	\$112.50				
Fertiliser (t)	\$25.00 /tonne	@	0.10	\$2.38	0.17	\$4.25	0.30	\$7.50				
Contract Work												
Aerial spraying	\$14.00 /ha	@	0	\$0.00	1	\$14.00	1	\$14.00				
Urea Spreading	\$8.50 /ha	@		\$0.00	1	\$8.50	2	\$17.00				
Insurance	\$8.50 /\$1000	@		\$4.34		\$7.65		\$11.5				
Other												
TOTAL VARIABLE COSTS										\$249	\$433	\$581
GROSS MARGIN/hectare										\$261	\$467	\$769
Break Even Price (to cover variable costs only)										\$147	\$144	\$129
Break Even Yield (to cover variable costs only)										0.83	1.44	1.94
Gross Margin based on last 5 year average price										\$246	\$442	\$731

COMMENTS

Assumes barley follows wheat.
 Price assumes Malting grade is achieved which is high risk.
 Achieving feed grade would result in lower Gross Margin.
 Having to windrow barley will reduce GM by around 25/ha
 (1) Smuts and bunts
 (2) Systiva Seed Dressing
 (3) Aphid Control
 (4) Includes surfactant and/or oil

AGRONOMIC NOTES

Urea may not be required following a legume pasture or grain legume crop

GROSS MARGIN SENSITIVITY LOW RAINFALL

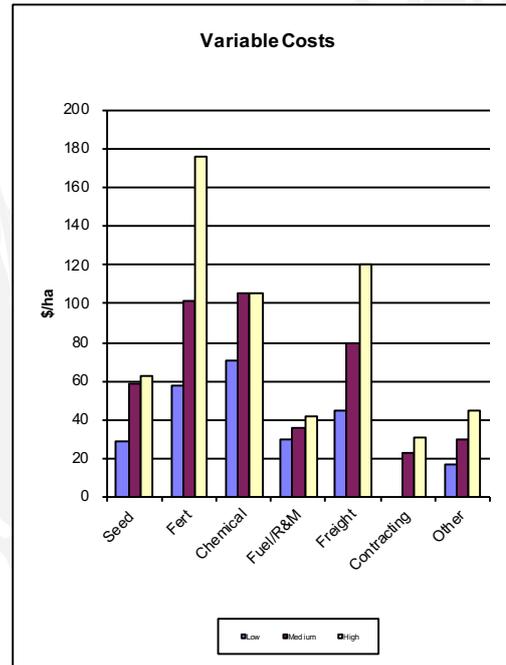
		Net Price \$/t				
		\$200	\$250	\$300	\$350	\$400
Yield t/ha	0.5	-\$106	-\$82	-\$57	-\$33	-\$8
	1.2	\$10	\$69	\$128	\$187	\$246
	1.7	\$94	\$177	\$261	\$344	\$428
	2.5	\$228	\$350	\$473	\$596	\$718
	3.5	\$395	\$566	\$738	\$910	\$1,082

MEDIUM RAINFALL

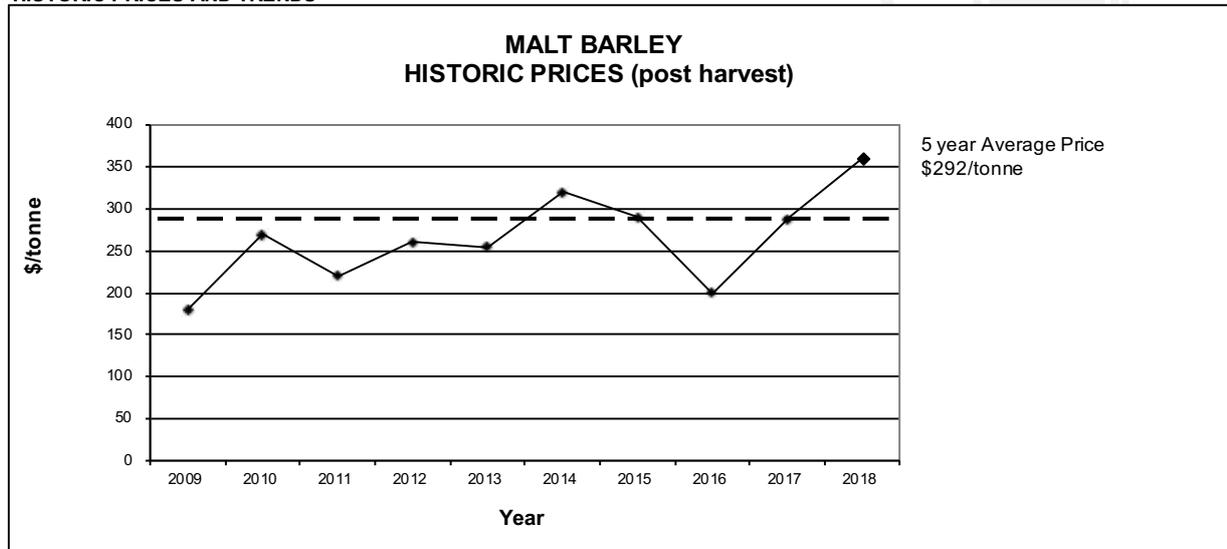
		Net Price \$/t				
		\$200	\$250	\$300	\$350	\$400
Yield t/ha	1	-\$161	-\$112	-\$63	-\$14	\$35
	2	\$6	\$104	\$202	\$300	\$398
	3	\$173	\$320	\$467	\$614	\$761
	4	\$340	\$536	\$732	\$928	\$1,125
	5	\$507	\$752	\$997	\$1,243	\$1,488

HIGH RAINFALL

		Net Price \$/t				
		\$200	\$250	\$300	\$350	\$400
Yield t/ha	2.5	-\$7	\$116	\$238	\$361	\$484
	3.5	\$160	\$332	\$503	\$675	\$847
	4.5	\$327	\$548	\$769	\$989	\$1,210
	5.5	\$494	\$764	\$1,034	\$1,304	\$1,573
	6.5	\$661	\$980	\$1,299	\$1,618	\$1,937



HISTORIC PRICES AND TRENDS



Machinery Costs - Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	5	2.92	2.15
harvest#	1	9.29	6.14
TOTAL		16.34	13.39

Rates are for low rainfall zone. Extra cost in higher yielding situations

GROSS MARGIN SENSITIVITY LOW RAINFALL

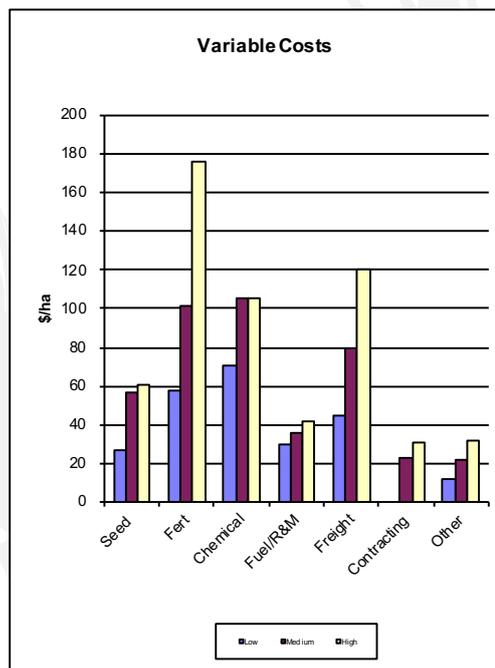
		Net Price \$/t				
		\$150	\$200	\$250	\$300	\$350
Yield t/ha	0.5	-\$128	-\$104	-\$79	-\$55	-\$30
	1.2	-\$45	\$14	\$73	\$132	\$191
	1.7	\$15	\$99	\$182	\$266	\$349
	2.5	\$111	\$234	\$357	\$479	\$602
	3.5	\$231	\$403	\$574	\$746	\$918

MEDIUM RAINFALL

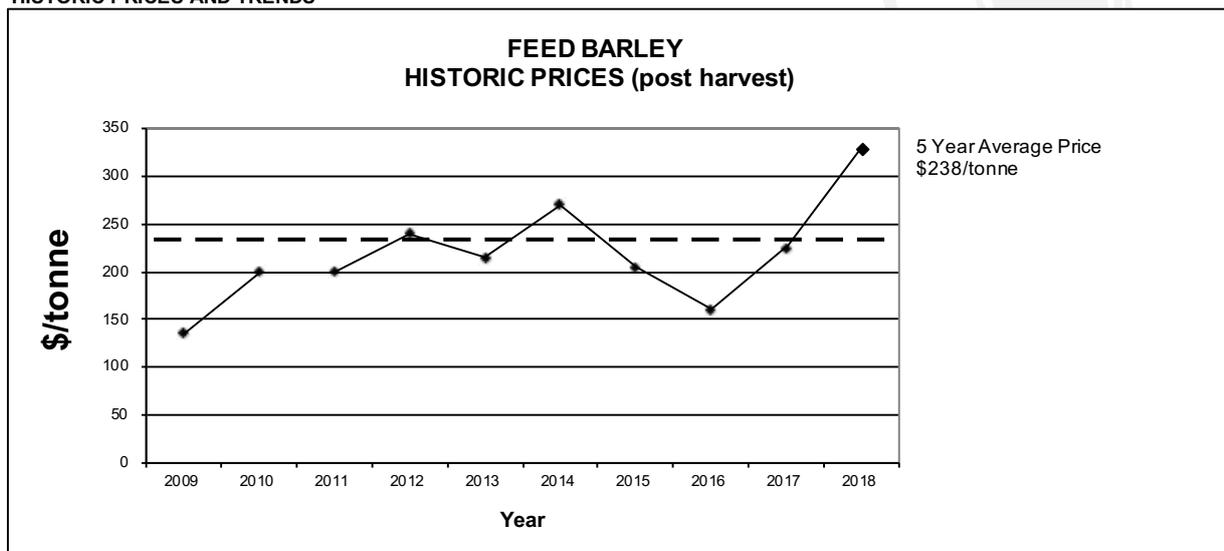
		Net Price \$/t				
		\$150	\$200	\$250	\$300	\$350
Yield t/ha	1	-\$207	-\$157	-\$108	-\$59	-\$10
	2	-\$87	\$11	\$110	\$208	\$306
	3	\$33	\$180	\$327	\$475	\$622
	4	\$153	\$349	\$545	\$742	\$938
	5	\$272	\$518	\$763	\$1,009	\$1,254

HIGH RAINFALL

		Net Price \$/t				
		\$150	\$200	\$250	\$300	\$350
Yield t/ha	2.5	-\$123	\$0	\$122	\$245	\$368
	3.5	-\$3	\$169	\$340	\$512	\$684
	4.5	\$116	\$337	\$558	\$779	\$1,000
	5.5	\$236	\$506	\$776	\$1,046	\$1,316
	6.5	\$356	\$675	\$994	\$1,313	\$1,632



HISTORIC PRICES AND TRENDS



Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	5	2.92	2.15
harvest#	1	9.29	6.14
TOTAL		16.34	13.39

Rates are for low rainfall zone. Extra cost in higher yielding situations

Milling Oats

							2019 YOUR ESTIMATE		
INCOME							LOW	MEDIUM	HIGH
		<i>Rainfall Zone</i>							
Price (19/20 Forecast)				\$300		\$300		\$300	
Quality	Milling								
Yield (t/ha)				1.5		2.8		4	
GROSS INCOME				\$450		\$840		\$1,200	
VARIABLE COSTS									
				Rate/ha		Rate/ha		Rate/ha	
				Low	\$/ha	Medium	\$/ha	High	
								\$/ha	
Seed									
Seed	\$0.60 /kg	@	50	\$30.00	65	\$39.00	80	\$48.00	
Seed Treatment (1)	\$0.04 /kg	@	50	\$2.04	65	\$2.66	80	\$3.27	
Seed Treatment (2)	\$8.39 /100kg	@			65	\$5.45	80	\$6.71	
Levies									
GRDC Levies	1.0% Gross Income			\$4.50		\$8.40		\$12.00	
EPR & state levies	\$2.50 /tonne sold			\$3.75		\$7.00		\$10.00	
Fertiliser (Bulk)									
18:20:0	\$685 /tonne	@	40	\$27.40	60	\$41.10	80	\$54.80	
Urea	\$540 /tonne	@	50	\$27.00	100	\$54.00	180	\$97.20	
Chemicals-Herbicides									
Summer Weed Control	Various	Allow		\$25.00		\$25.00		\$25.00	
Pre-emergents									
Glyphosate 540	\$6.30 /litre	@	1.2	\$7.56	1.2	\$7.56	1.2	\$7.56	
Carfentrazone 400g/L	\$166.00 /litre	@	0.02	\$3.32	0.02	\$3.32	0.02	\$3.32	
Dual Gold	\$16.00 /litre	@	0.5	\$8.00	0.5	\$8.00	0.5	\$8.00	
Diuron	\$11.10 /kg	@	0.4	\$4.44	0.4	\$4.44	0.4	\$4.44	
Post-emergents									
MCPA Amine	\$9.20 /litre	@	0.5	\$4.60	0.5	\$4.60	0.5	\$4.60	
Fungicides									
Tebuconazole	\$14.80 /litre	@	0.145	\$2.15	0.145	\$2.15	0.145	\$2.15	
Operations									
Fuel & Oil				\$13.82		\$16.58		\$19.35	
Repairs & Maintenance				\$16.92		\$20.30		\$23.69	
Freight									
Grain (t)	\$25.00 /tonne	@	1.5	\$37.50	2.8	\$70.00	4.0	\$100.00	
Fertiliser (t)	\$25.00 /tonne	@	0.09	\$2.25	0.16	\$4.00	0.26	\$6.50	
Contract Work									
Aerial spraying									
Urea spreading	\$8.50 /ha	@		\$0.00	1	\$8.50	2	\$17.00	
Insurance	\$8.50 /\$1000	@		\$3.83		\$7.14		\$10.20	
Other									
TOTAL VARIABLE COSTS				\$224		\$339		\$464	
GROSS MARGIN/hectare				\$226		\$501		\$736	
Break Even Price (to cover variable costs only)				\$149		\$121		\$116	
Break Even Yield (to cover variable costs only)				0.75		1.13		1.55	
Gross Margin based on last 5 year average price				\$226		\$501		\$736	

COMMENTS

Assumes oats follows a cereal. If following a legume less N will be required.

- (1) Smuts and bunts
- (2) Aphid treatment

AGRONOMIC NOTES

GROSS MARGIN SENSITIVITY LOW RAINFALL

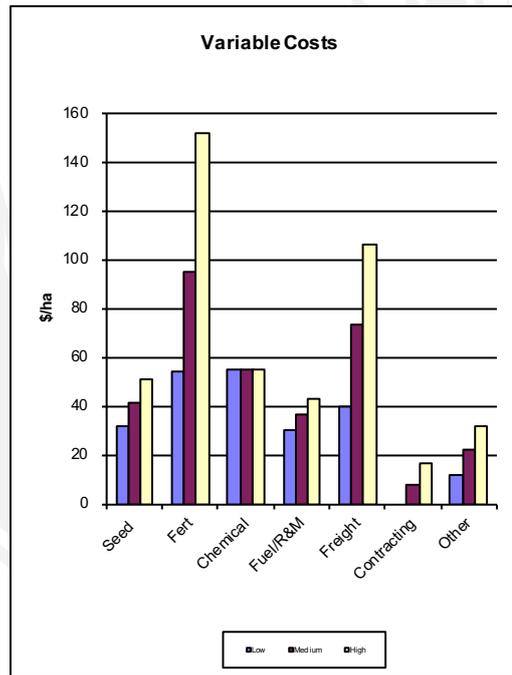
		Net Price \$/t				
		\$200	\$250	\$300	\$350	\$400
Yield t/ha	0.5	-\$90	-\$66	-\$41	-\$16	\$8
	1.5	\$79	\$152	\$226	\$300	\$373
	2.5	\$248	\$370	\$493	\$616	\$738
	3.5	\$416	\$588	\$760	\$932	\$1,103

MEDIUM RAINFALL

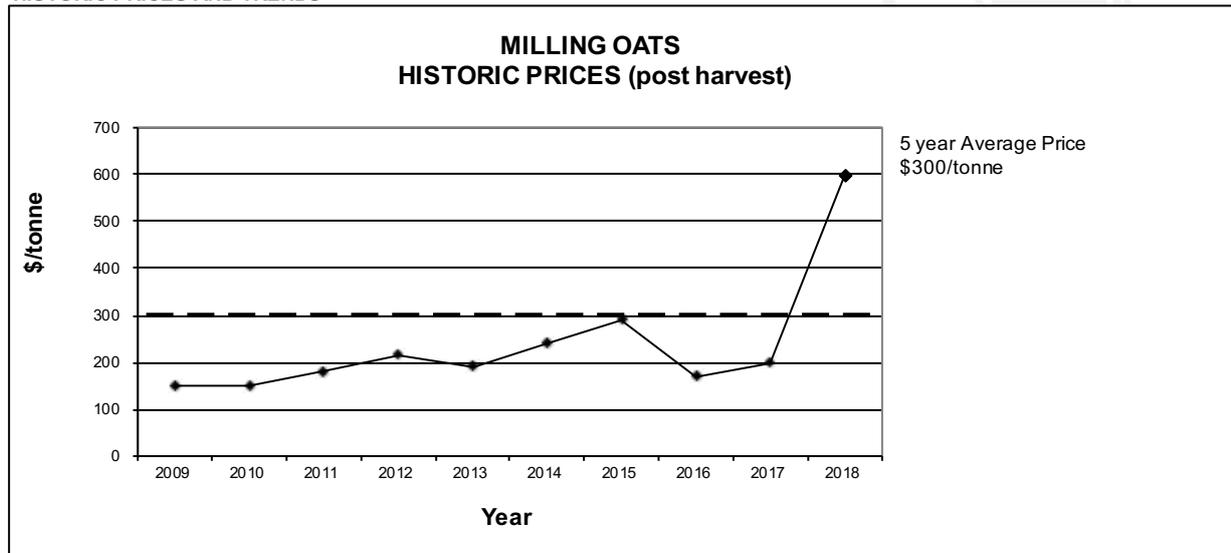
		Net Price \$/t				
		\$200	\$250	\$300	\$350	\$400
Yield t/ha	2	\$91	\$189	\$287	\$385	\$484
	2.8	\$226	\$363	\$501	\$638	\$776
	4	\$429	\$625	\$821	\$1,017	\$1,214
	5	\$597	\$843	\$1,088	\$1,333	\$1,579

HIGH RAINFALL

		Net Price \$/t				
		\$200	\$250	\$300	\$350	\$400
Yield t/ha	2	\$6	\$104	\$202	\$300	\$399
	3	\$175	\$322	\$469	\$616	\$764
	4	\$344	\$540	\$736	\$933	\$1,129
	5	\$512	\$758	\$1,003	\$1,249	\$1,494



HISTORIC PRICES AND TRENDS



Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	6	3.50	2.58
harvest#	1	9.29	6.14
TOTAL		16.92	13.82

Rates are for low rainfall zone. Extra cost in higher yielding situations

Triticale

										2019		
										YOUR		
INCOME										ESTIMATE		
										Rainfall Zone		
										LOW	MEDIUM	HIGH
Price (19/20 Forecast)				\$240		\$240		\$240				
Quality												
Yield (t/ha)				1.4		2.6		3.7				
GROSS INCOME				\$336		\$624		\$888				
VARIABLE COSTS												
				Rate/ha		Rate/ha		Rate/ha				
Cost				Low		Medium		High				
				\$/ha		\$/ha		\$/ha				
Seed												
Seed		\$0.32 /kg	@	60	\$18.90	80	\$25.20	85	\$26.78			
Seed Treatment		\$0.04 /kg	@	60	\$2.45	80	\$3.27	85	\$3.47			
Levies												
GRDC Levies		1.0% Gross Income			\$3.36		\$6.24		\$8.88			
EPR & state levies		\$3.00 /tonne sold			\$4.20		\$7.80		\$11.10			
Fertiliser (Bulk)												
18:20:0		\$685 /tonne	@	40	\$27.40	60	\$41.10	80	\$54.80			
Urea		\$540 /tonne	@	50	\$27.00	100	\$54.00	150	\$81.00			
Chemicals-Herbicides												
Summer Weed Control		Various Allow			\$25.00		\$25.00		\$25.00			
Pre-emergents												
Trifluralin 480g/L		\$5.24 /litre	@	1.5	\$7.86	1.5	\$7.86	1.5	\$7.86			
Glyphosate 540		\$6.30 /litre	@	1.2	\$7.56	1.2	\$7.56	1.2	\$7.56			
Carfentrazone 400g/L		\$166.00 /litre	@	0.02	\$3.32	0.02	\$3.32	0.02	\$3.32			
Tri-allate 500g/L		\$8.86 /litre	@		\$0.00	1.6	\$14.18	1.6	\$14.18			
Post-emergents												
MCPALVE		\$8.13 /litre	@	0		0.5	\$4.07	0.5	\$4.07			
MCPA amine		\$9.20 /litre	@	0.5	\$4.60		\$0.00		\$0.00			
Metsulfuron methyl(1)		\$0.06 /gm	@	5	\$0.71	5	\$0.71	5	\$0.71			
Clopyralid 600g/L		\$38.28 /litre	@	0.04	\$1.53	0.04	\$1.53	0.04	\$1.53			
Fungicides												
Operations												
Fuel & Oil					\$13.82		\$16.58		\$19.35			
Repairs & Maintenance					\$16.92		\$20.30		\$23.69			
Freight												
Grain (t)		\$25.00 /tonne	@	1.4	\$35.00	2.6	\$65.00	3.7	\$92.50			
Fertiliser (t)		\$25.00 /tonne	@	0.09	\$2.25	0.16	\$4.00	0.23	\$5.75			
Contract Work												
Aerial spraying												
Urea spreading		\$8.50 /ha	@		\$0.00	1	\$8.50	2	\$17.00			
Insurance		\$8.50 /\$1000	@		\$2.86		\$5.30		\$7.55			
Other												
TOTAL VARIABLE COSTS				\$205		\$322		\$416				
GROSS MARGIN/hectare				\$131		\$302		\$472				
Break Even Price (to cover variable costs only)				\$146		\$124		\$112				
Break Even Yield (to cover variable costs only)				0.85		1.34		1.73				
Gross Margin based on last 5 year average price				\$127		\$295		\$461				

COMMENTS

This rate of fertiliser assumes triticale follows a cereal

(1) Surfactant at 0.1%

AGRONOMIC NOTES

GROSS MARGIN SENSITIVITY

LOW RAINFALL

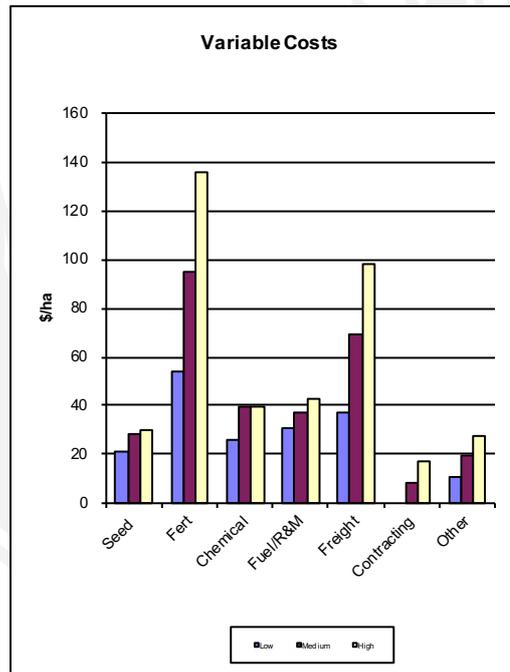
		Net Price \$/t				
		\$160	\$200	\$240	\$280	\$320
Yield t/ha	0.5	-\$95	-\$75	-\$56	-\$36	-\$16
	1	-\$30	\$9	\$48	\$87	\$127
	1.4	\$21	\$76	\$131	\$186	\$241
	2	\$99	\$177	\$256	\$334	\$413
	3	\$228	\$346	\$463	\$581	\$699

MEDIUM RAINFALL

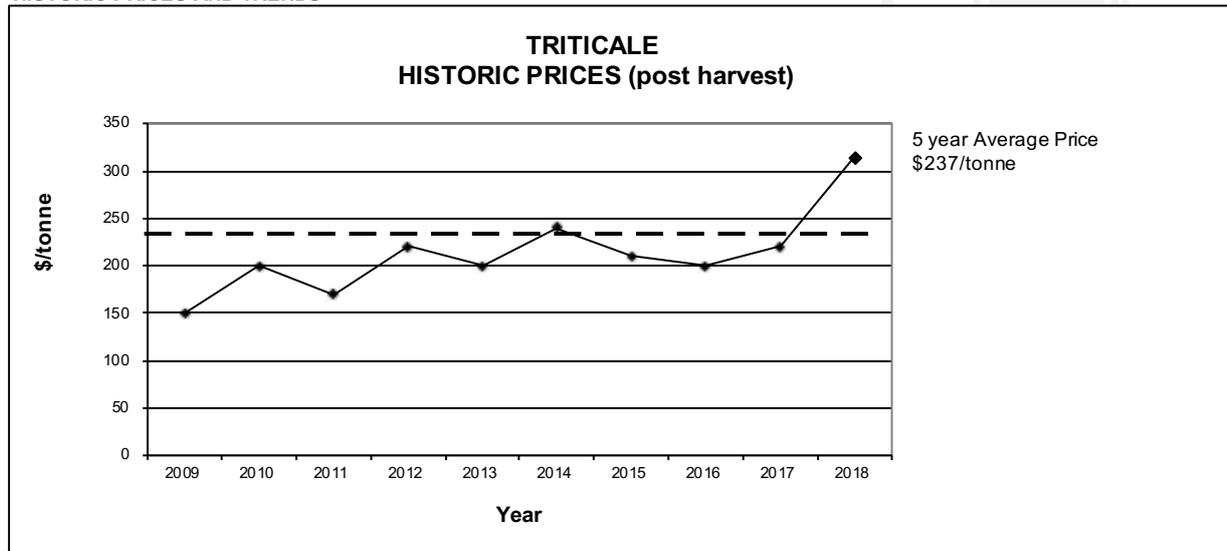
		Net Price \$/t				
		\$160	\$200	\$240	\$280	\$320
Yield t/ha	1	-\$108	-\$69	-\$30	\$10	\$49
	1.6	-\$31	\$32	\$95	\$158	\$221
	2.6	\$98	\$200	\$302	\$405	\$507
	3.2	\$176	\$301	\$427	\$553	\$678
	4	\$279	\$436	\$593	\$750	\$907

HIGH RAINFALL

		Net Price \$/t				
		\$160	\$200	\$240	\$280	\$320
Yield t/ha	1.5	-\$102	-\$44	\$15	\$74	\$133
	2.5	\$27	\$125	\$223	\$321	\$419
	3.7	\$181	\$327	\$472	\$617	\$762
	4.5	\$285	\$461	\$638	\$815	\$991
	5.5	\$414	\$630	\$846	\$1,061	\$1,277



HISTORIC PRICES AND TRENDS



Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	6	3.50	2.58
harvest#	1	9.29	6.14
TOTAL		16.92	13.82

Rates are for low rainfall zone. Extra cost in higher yielding situations

Export Oaten Hay

										2019 YOUR ESTIMATE
INCOME										
				<i>Rainfall Zone</i>						
				LOW		MEDIUM		HIGH		
Price (19/20 Forecast)				\$250		\$235		\$205		
Quality Mixed grades										
Yield (t/ha)				3.50		5.50		8		
GROSS INCOME				\$875		\$1,293		\$1,640		
VARIABLE COSTS										
				Rate/ha		Rate/ha		Rate/ha		
Cost				Low	\$/ha	Medium	\$/ha	High	\$/ha	
Seed										
Levies										
Seed	\$650.00	/tonne	@	90	\$58.50	110	\$71.50	130	\$84.50	
Seed Treatment	\$0.00	/tonne	@			0	\$0.00	0	\$0.00	
Fertiliser (Bulk)										
18:20:0	\$685	/tonne	@	60	\$41.10	80	\$54.80	110	\$75.35	
Urea	\$540	/tonne	@	30	\$16.20	75	\$40.50	150	\$81.00	
Chemicals-Herbicides										
Summer Weed Control Various Allow				\$25.00		\$25.00		\$25.00		
Pre-emergents										
Glyphosate 540	\$6.30	/litre	@	1.2	\$7.56	1.2	\$7.56	1.2	\$7.56	
Carfentrazone 400g/L	\$166.00	/litre	@	0.02	\$3.32	0.02	\$3.32	0.02	\$3.32	
Post-emergents										
Diuron	\$11.10	/Kg	@	0.4	\$4.44	0.4	\$4.44	0.4	\$4.44	
MCPA Amine	\$9.20	/litre	@	0.5	\$4.60	0.5	\$4.60	0.5	\$4.60	
Pre cutting-Glypho (1)	\$6.30	/litre	@	2	\$12.60	2.5	\$15.75	2.5	\$15.75	
Insecticides										
Fungicides										
Propiconazole 250g/L	\$11.90	/litre	@	0.35	\$4.17	0.35	\$4.17	0.35	\$4.17	
Operations										
Fuel & Oil				\$9.40		\$10.34		\$11.27		
Repairs & Maintenance				\$8.98		\$9.88		\$10.78		
Freight										
Hay	\$30.00	/tonne	@	3.5	\$105.00	5.5	\$165.00	8.0	\$240.00	
Fertiliser (t)	\$25.00	/tonne	@	0.09	\$2.25	0.16	\$3.88	0.26	\$6.50	
Contract Work										
Hay mowing	\$50.00	/ha	@	1.0	\$50.00	1.0	\$50.00	1.0	\$50.00	
Super Conditioner	\$25-40.00	/ha	@	1.0	\$25.00	1.0	\$30.00	1.0	\$35.00	
Hay baling	\$25.00	/bale	@	3.5	\$120.69	5.5	\$189.66	8.0	\$275.86	
Hay Accumulation	\$3.00	/bale	@	3.5	\$14.48	5.5	\$22.76	8.0	\$33.10	
Insurance	\$2.50	/ \$1000	@		\$2.19		\$3.23		\$4.10	
TOTAL VARIABLE COSTS				\$515		\$716		\$972		
GROSS MARGIN/hectare				\$360		\$576		\$668		
Break Even Price (to cover variable costs only)				\$147		\$130		\$122		
Break Even Yield (to cover variable costs only)				2.06		3.05		4.74		
Gross Margin based on last 5 year average price				\$199		\$406		\$660		

COMMENTS

Price received is strongly related to yield. Fertiliser rate assumes hay follows a cereal. Bonuses for shedding and late delivery may apply. Additional capital costs including shedding and extra machinery may be needed.

AGRONOMIC NOTES

The use of a 'super conditioner' can significantly reduce drying time and subsequently risk with less chance of a quality downgrade. No allowance has been made for cost of raking.

(1) Glyphosate Weedmaster DST registered for this use

GROSS MARGIN SENSITIVITY LOW RAINFALL

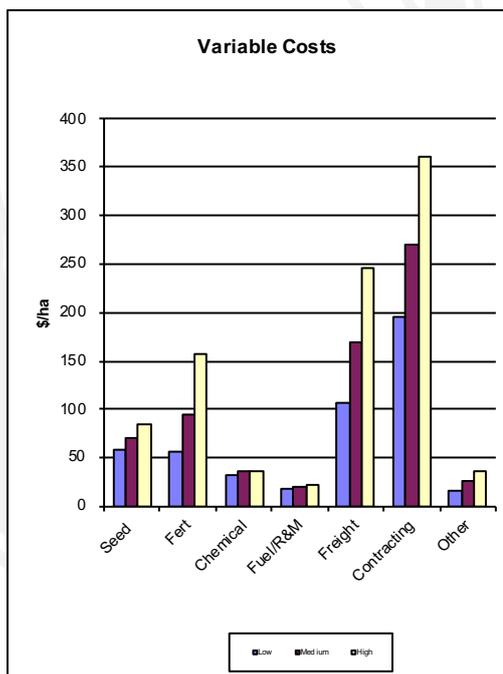
		Net Price \$/t				
		\$210	\$230	\$250	\$270	\$290
Yield t/ha	1.5	-\$62	-\$32	-\$2	\$28	\$58
	2.5	\$79	\$129	\$179	\$229	\$279
	3.5	\$220	\$290	\$360	\$429	\$499
	4.5	\$361	\$451	\$540	\$630	\$720

MEDIUM RAINFALL

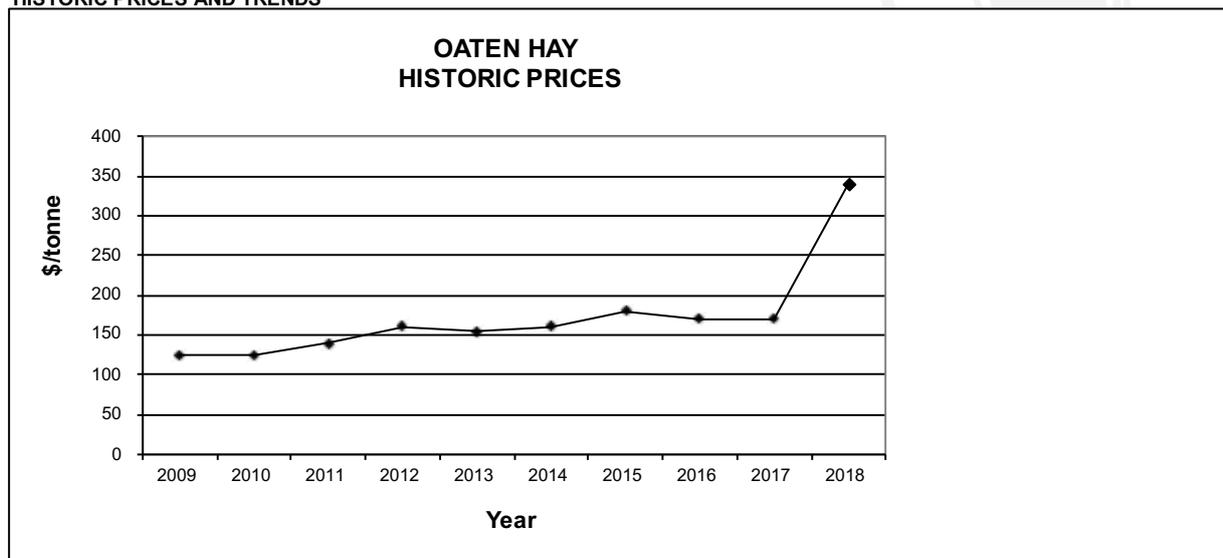
		Net Price \$/t				
		\$195	\$215	\$235	\$255	\$275
Yield t/ha	2	-\$84	-\$44	-\$4	\$36	\$76
	3.5	\$105	\$175	\$245	\$314	\$384
	5.5	\$357	\$466	\$576	\$686	\$796
	7.5	\$608	\$758	\$908	\$1,057	\$1,207

HIGH RAINFALL

		Net Price \$/t				
		\$165	\$185	\$205	\$235	\$265
Yield t/ha	4	-\$35	\$44	\$124	\$244	\$364
	6	\$157	\$276	\$396	\$576	\$755
	8	\$348	\$508	\$668	\$907	\$1,146
	10	\$540	\$740	\$939	\$1,239	\$1,538



HISTORIC PRICES AND TRENDS



Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	6	3.50	2.58
roll	1	1.35	1.72
TOTAL		8.98	9.40

Rates are for low rainfall zone. Extra cost in higher yielding situations

Grain Vetch

										2019 YOUR ESTIMATE
INCOME										
		<i>Rainfall Zone</i>			LOW	MEDIUM			HIGH	
Price (19/20 Forecast)					\$550				\$550	
Quality Morava vetch										
Yield (t/ha)					0.8				1.5	2.2
GROSS INCOME					\$440				\$825	\$1,210
VARIABLE COSTS										
				Rate/ha		Rate/ha		Rate/ha		
Cost				Low	\$/ha	Medium	\$/ha	High	\$/ha	
Seed										
Seed	\$0.70 /kg	@	30	\$21.00	40	\$28.00	50	\$35.00		
Seed Inoculant	\$0.05 /kg	@	30	\$1.50	40	\$2.00	50	\$2.50		
Levies										
GRDC Levies	1.0% Gross Income			\$4.40		\$8.25		\$12.10		
Fertiliser (Bulk)										
MAP	\$685 /tonne	@	40	\$27.40	60	\$41.10	80	\$54.80		
Chemicals-Herbicides										
Summer Weed Control	Various Allow			\$25.00		\$25.00		\$25.00		
Pre-emergents										
Metribuzin 750 gm/kg	\$31.20 /kg	@	0.2	\$6.24	0.25	\$7.80	0.3	\$9.36		
Trifluralin 480g/L	\$5.24 /litre	@	1.5	\$7.86	2	\$10.48	2	\$10.48		
Tri-allate 500g/L	\$8.86 /litre	@		\$0.00	1.6	\$14.18	1.6	\$14.18		
Glyphosate 540	\$6.30 /litre	@	1.2	\$7.56	1.2	\$7.56	1.2	\$7.56		
Carfentrazone 400g/L	\$166.00 /litre	@	0.02	\$3.32	0.02	\$3.32	0.02	\$3.32		
Post-emergents										
Clethodim (incl Oil)	\$13.25 /litre	@	0.5	\$8.95	0.5	\$8.95	0.5	\$8.95		
Haloxypop 520g/L	\$45.60 /litre	@	0.04	\$1.82	0.04	\$1.82				
Factor	\$0.12 /gm	@					180	\$21.60		
Paraquat (Topping)	\$5.88 /litre	@	0.8	\$4.70	0.8	\$4.70	0.8	\$4.70		
Insecticides										
Dimethoate (1)	\$9.40 /litre	@	0.4	\$3.76	0.4	\$3.76	0.4	\$3.76		
Karate Zeon® (2)	\$85.00 /litre	@	0.024	\$2.04	0.024	\$2.04	0.024	\$2.04		
Operations										
Fuel & Oil				\$18.86				\$22.63	\$26.40	
Repairs & Maintenance				\$30.95				\$37.14	\$43.33	
Freight										
Grain (t)	\$30.00 /tonne	@	0.8	\$24.00	1.5	\$45.00	2.2	\$66.00		
Fertiliser (t)	\$25.00 /tonne	@	0.04	\$1.00	0.06	\$1.50	0.08	\$2.00		
Contract Work										
Aerial spraying										
Insurance	\$12.00 /\$1000	@		\$5.28				\$9.90	\$14.52	
Other										
TOTAL VARIABLE COSTS					\$206				\$285	\$368
GROSS MARGIN/hectare					\$234				\$540	\$842
Break Even Price (to cover variable costs only)					\$257				\$190	\$167
Break Even Yield (to cover variable costs only)					0.37				0.52	0.67
Gross Margin based on last 5 year average price					\$250				\$570	\$886

COMMENTS

Seed is not treated with a fungicide or graded.

(1) Cow pea aphid

(2) Native budworm

Do not exceed 800 ml/Ha Paraquat 250 when crop topping to avoid possible residue issues.

AGRONOMIC NOTES

Lexone (Metribuzin) not recommended on some varieties.

Seek advice (also applies to using Diuron on vetch).

Harvest and marketing difficulties are common with this crop.

Vetch is a dual purpose crop and grain production following grazing is possible. This can markedly influence Gross Margin performance.

GROSS MARGIN SENSITIVITY LOW RAINFALL

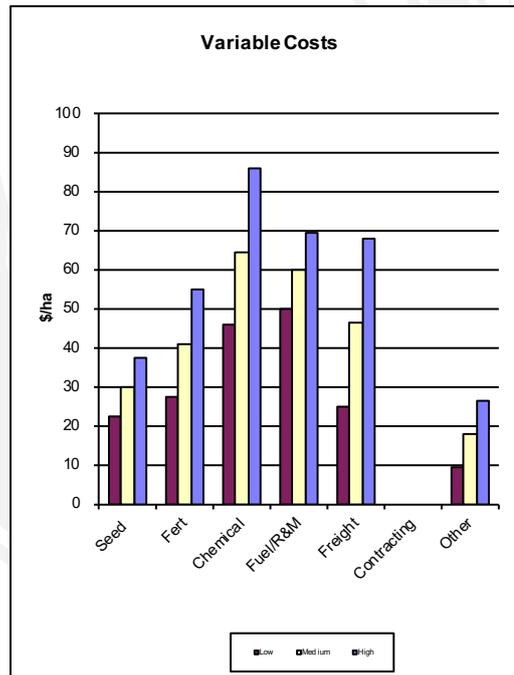
		Net Price \$/t				
		\$350	\$450	\$550	\$650	\$750
Yield t/ha	0.3	-\$78	-\$49	-\$20	\$10	\$39
	0.8	\$78	\$156	\$234	\$313	\$391
	1.2	\$203	\$320	\$438	\$555	\$672
	2	\$453	\$648	\$844	\$1,039	\$1,235

MEDIUM RAINFALL

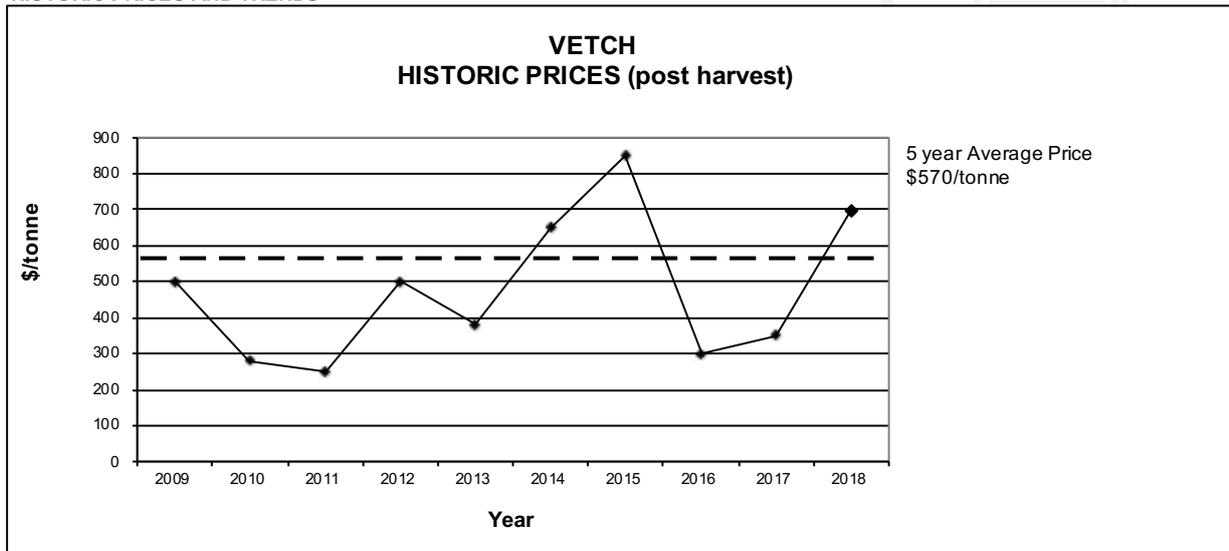
		Net Price \$/t				
		\$350	\$450	\$550	\$650	\$750
Yield t/ha	0.5	-\$66	-\$17	\$32	\$81	\$130
	1	\$90	\$188	\$286	\$384	\$482
	1.5	\$246	\$393	\$540	\$687	\$833
	2.5	\$559	\$803	\$1,048	\$1,292	\$1,537

HIGH RAINFALL

		Net Price \$/t				
		\$350	\$450	\$550	\$650	\$750
Yield t/ha	0.8	-\$25	\$53	\$131	\$210	\$288
	1.5	\$193	\$340	\$487	\$634	\$780
	2.2	\$412	\$627	\$842	\$1,058	\$1,273
	3	\$662	\$955	\$1,249	\$1,542	\$1,836



HISTORIC PRICES AND TRENDS



Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	8	4.67	3.44
roll	1	1.35	1.72
harvest#	1	20.80	8.60
TOTAL		30.95	18.86

Rates are for low rainfall zone. Extra cost in higher yielding situations

							2019 YOUR ESTIMATE	
INCOME		Rainfall Zone		LOW	MEDIUM	HIGH		
Price (19/20 Forecast)				\$400	\$400	\$400		
Quality								
Yield (t/ha)				1	1.7	2.4		
GROSS INCOME				\$400	\$680	\$960		
VARIABLE COSTS			Rate/ha		Rate/ha		Rate/ha	
Cost			Low	\$/ha	Medium	\$/ha	High	\$/ha
Seed								
Seed	\$0.55 /kg	@	90	\$49.50	90	\$49.50	90	\$49.50
Seed Inoculant	\$0.05 /kg	@	90	\$4.50	90	\$4.50	90	\$4.50
Seed Treatment(1)	\$11.53 /100kg	@	90	\$10.38	90	\$10.38	90	\$10.38
Levies								
GRDC Levies	1.0% Gross Income			\$4.00		\$6.80		\$9.60
EPR &state levies	\$2.80 /tonne sold			\$2.80		\$4.76		\$6.72
Fertiliser (Bulk)								
MAP	\$685 /tonne	@	40	27.4	60	\$41.10	80	\$54.80
Chemicals-Herbicides								
Summer Weed Control	Various	Allow		\$25.00		\$25.00		\$25.00
Pre-emergents								
Trifluralin 480g/L	\$5.24 /litre	@	1.5	\$7.86				
Propyzamide	\$19.94 /litre	@			1	\$19.94	1	\$19.94
Glyphosate 540	\$6.30 /litre	@	1.2	\$7.56	1.2	\$7.56	1.2	\$7.56
Simazine Granules	\$7.60 /kg	@	0.83	\$6.31	0.83	\$6.31	0.83	\$6.31
Carfentrazone 400g/L	\$166.00 /litre	@	0.02	\$3.32	0.02	\$3.32	0.02	\$3.32
Post-emergents								
Clethodim (incl Oil)	\$13.25 /litre	@	0.5	\$8.95	0.5	\$8.95	0.5	\$8.95
Haloxypop 520g/L	\$45.60 /litre	@	0.04	\$1.82	0.04	\$1.82		
Factor	\$0.12 /gm						180	\$21.60
Paraquat (Topping)	\$5.88 /litre	@	0.8	\$4.70	0.8	\$4.70	0.8	\$4.70
Insecticides								
Talstar (2)	\$29.60 /litre	@	0.04	\$1.18	0.04	\$1.18	0.04	\$1.18
Karate Zeon® (3)	\$85.00 /litre	@	0.024	\$2.04	0.024	\$2.04	0.024	\$2.04
Operations								
Fuel & Oil				\$15.70		\$18.84		\$21.98
Repairs & Maintenance				\$21.80		\$26.16		\$30.52
Freight								
Grain (t)	\$30.00 /tonne	@	1.0	\$30.00	1.7	\$51.00	2.4	\$72.00
Fertiliser (t)	\$25.00 /tonne	@	0.04	\$1.00	0.06	\$1.50	0.08	\$2.00
Contract Work								
Aerial spraying	\$14.00 /ha	@		\$0		\$0.00		\$0.00
Insurance	\$10.00 /\$1000	@		\$4.00		\$6.80		\$9.60
Other								
TOTAL VARIABLE COSTS				\$240		\$302		\$372
GROSS MARGIN/hectare				\$160		\$378		\$588
Break Even Price (to cover variable costs only)				\$240		\$178		\$155
Break Even Yield (to cover variable costs only)				0.60		0.76		0.93
Gross Margin based on last 5 year average price				\$113		\$298		\$475

COMMENTS

(1) Seed treatment for aphid control for controlling viruses
 (2) RLEM
 (3) Native budworm
 Do not exceed 800ml/Ha when crop topping with Paraquat 250 to avoid any possible residue issues.

AGRONOMIC NOTES

GROSS MARGIN SENSITIVITY LOW RAINFALL

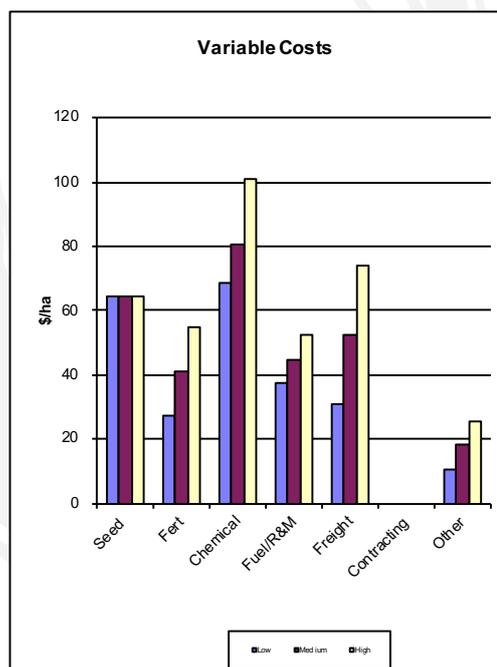
		Net Price \$/t				
		\$300	\$350	\$400	\$450	\$500
Yield t/ha	0.5	-\$68	-\$44	-\$19	\$5	\$30
	0.9	\$36	\$80	\$124	\$168	\$212
	1.5	\$193	\$266	\$340	\$413	\$487
	2	\$323	\$421	\$519	\$617	\$715

MEDIUM RAINFALL

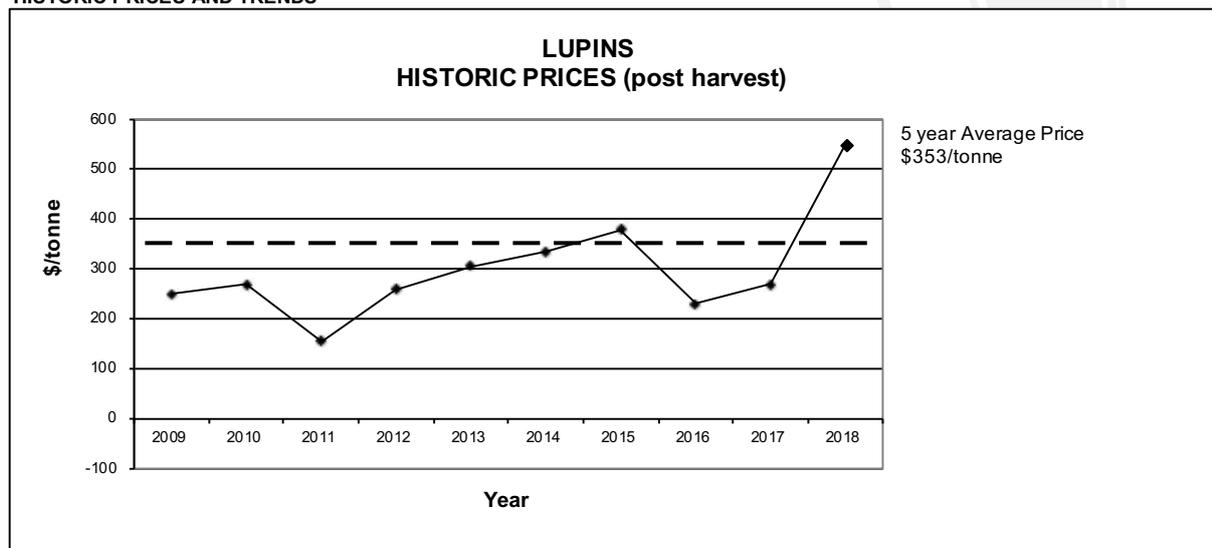
		Net Price \$/t				
		\$300	\$350	\$400	\$450	\$500
Yield t/ha	0.5	-\$102	-\$78	-\$53	-\$29	-\$4
	1	\$28	\$77	\$126	\$175	\$224
	1.5	\$159	\$232	\$306	\$379	\$453
	2	\$290	\$388	\$486	\$584	\$682

HIGH RAINFALL

		Net Price \$/t				
		\$300	\$350	\$400	\$450	\$500
Yield t/ha	1	-\$13	\$36	\$85	\$134	\$183
	1.5	\$118	\$191	\$265	\$338	\$412
	2	\$248	\$346	\$444	\$542	\$640
	2.5	\$379	\$501	\$624	\$746	\$869



HISTORIC PRICES AND TRENDS



Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	8	4.67	3.44
harvest#	1	13.00	7.17
TOTAL		21.80	15.70

Rates are for low rainfall zone. Extra cost in higher yielding situations

GROSS MARGIN SENSITIVITY LOW RAINFALL

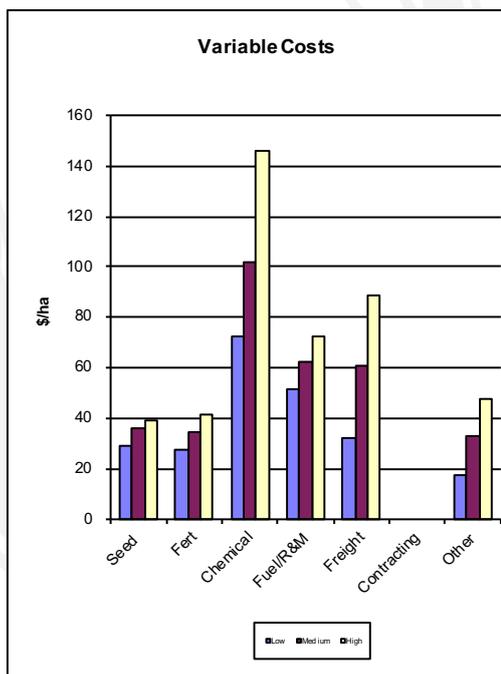
		Net Price \$/t				
		\$400	\$500	\$600	\$700	\$800
Yield t/ha	0.3	-\$102	-\$72	-\$43	-\$14	\$16
	0.9	\$108	\$196	\$284	\$372	\$460
	1.1	\$178	\$286	\$394	\$501	\$609
	1.5	\$319	\$465	\$612	\$759	\$905

MEDIUM RAINFALL

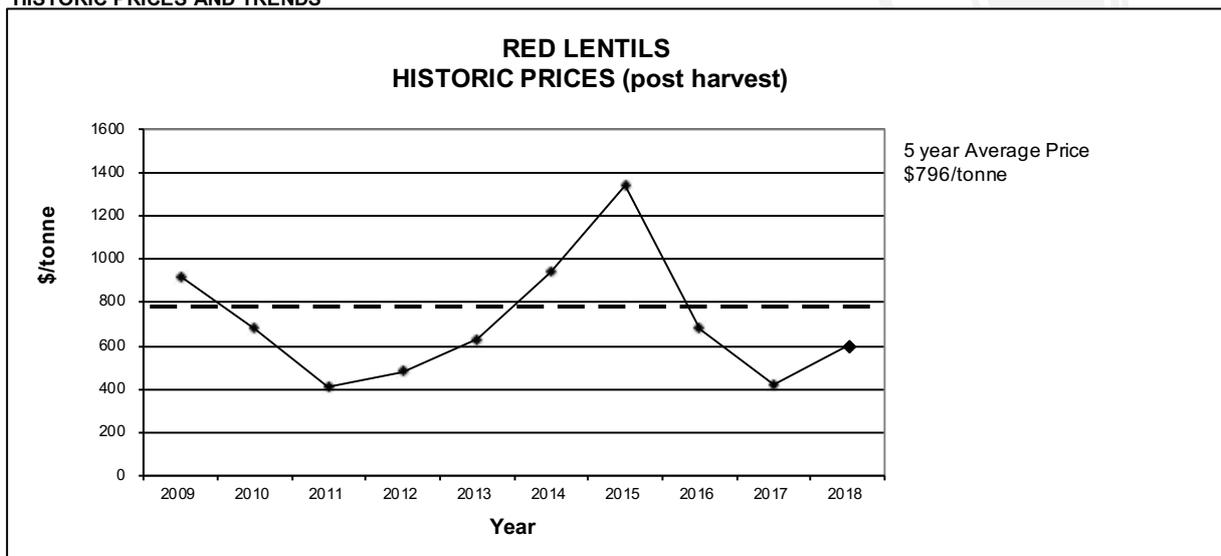
		Net Price \$/t				
		\$400	\$500	\$600	\$700	\$800
Yield t/ha	0.8	\$20	\$98	\$176	\$254	\$333
	1.7	\$335	\$501	\$667	\$834	\$1,000
	2.2	\$510	\$725	\$940	\$1,155	\$1,371
	3	\$790	\$1,083	\$1,377	\$1,670	\$1,964

HIGH RAINFALL

		Net Price \$/t				
		\$400	\$500	\$600	\$700	\$800
Yield t/ha	1.2	\$95	\$212	\$329	\$447	\$564
	2	\$375	\$570	\$766	\$962	\$1,157
	2.5	\$550	\$794	\$1,039	\$1,283	\$1,528
	3.5	\$900	\$1,242	\$1,585	\$1,927	\$2,269



HISTORIC PRICES AND TRENDS



Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	10	5.83	4.30
roll	1	1.35	1.72
harvest#	1	20.80	8.60
TOTAL		32.12	19.72

Rates are for low rainfall zone. Extra cost in higher yielding situations

GROSS MARGIN SENSITIVITY LOW RAINFALL

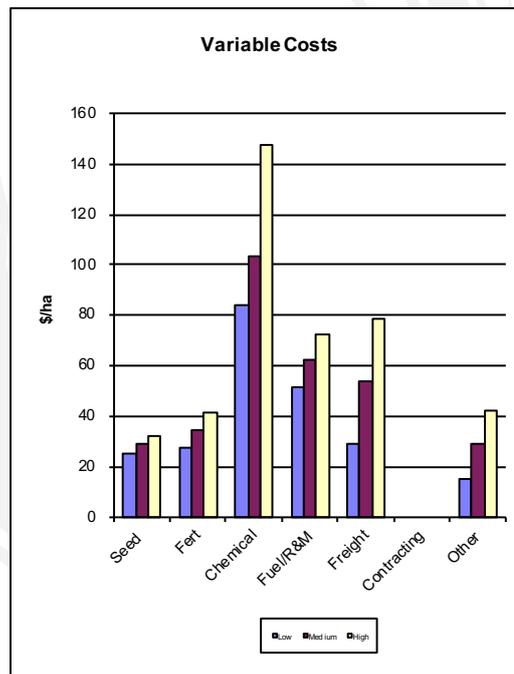
		Net Price \$/t				
		\$400	\$500	\$600	\$700	\$800
	0.3	-\$109	-\$80	-\$50	-\$21	\$8
Yield	0.8	\$66	\$144	\$223	\$301	\$379
t/ha	1.1	\$171	\$279	\$386	\$494	\$601
	1.5	\$311	\$458	\$605	\$751	\$898

MEDIUM RAINFALL

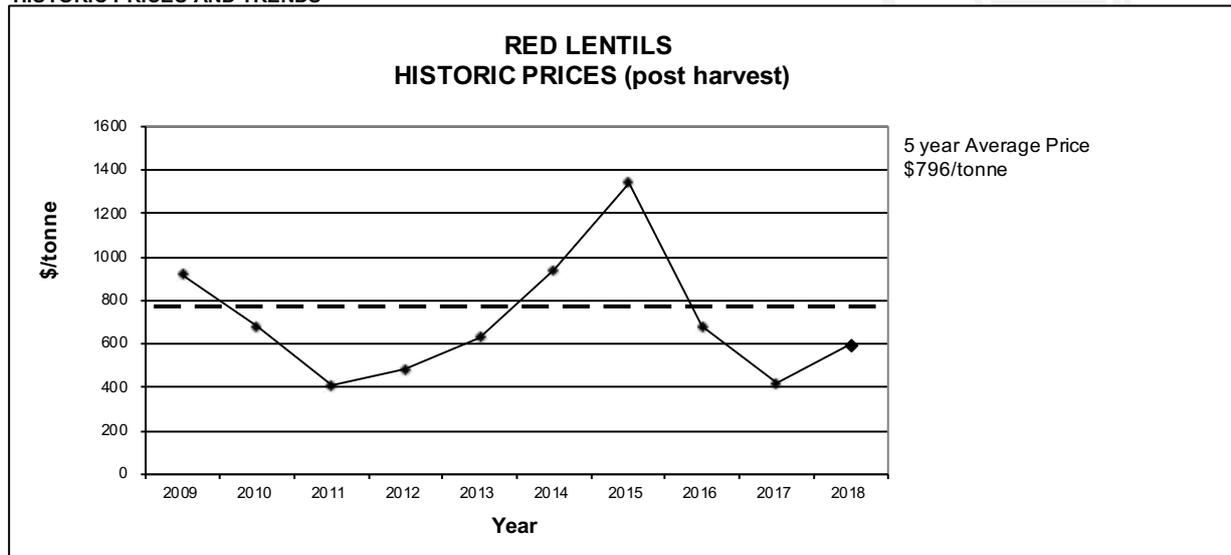
		Net Price \$/t				
		\$400	\$500	\$600	\$700	\$800
	0.8	\$25	\$104	\$182	\$260	\$338
Yield	1.5	\$270	\$417	\$564	\$711	\$857
t/ha	2	\$446	\$641	\$837	\$1,032	\$1,228
	3	\$796	\$1,089	\$1,383	\$1,676	\$1,969

HIGH RAINFALL

		Net Price \$/t				
		\$400	\$500	\$600	\$700	\$800
	0.8	-\$40	\$39	\$117	\$195	\$273
Yield	1.5	\$205	\$352	\$499	\$646	\$792
t/ha	2.2	\$451	\$666	\$881	\$1,096	\$1,311
	3	\$731	\$1,024	\$1,318	\$1,611	\$1,904



HISTORIC PRICES AND TRENDS



Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	10	5.83	4.30
roll	1	1.35	1.72
harvest#	1	20.80	8.60
TOTAL		32.12	19.72

Rates are for low rainfall zone. Extra cost in higher yielding situations

GROSS MARGIN SENSITIVITY LOW RAINFALL

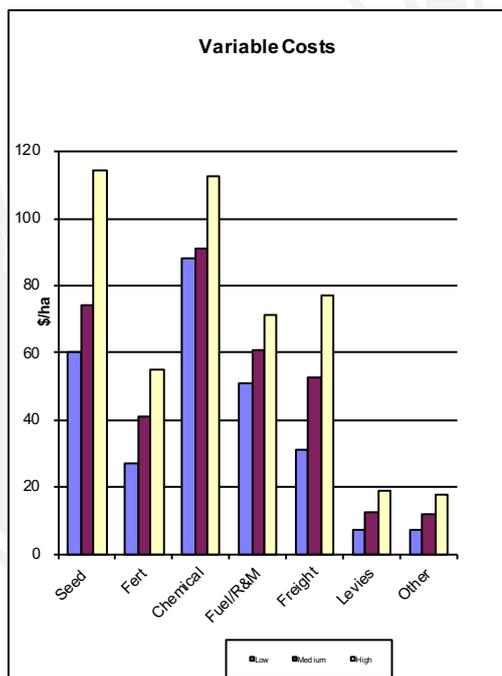
		Net Price \$/t				
		\$250	\$350	\$450	\$550	\$650
Yield t/ha	0.5	-\$123	-\$74	-\$25	\$23	\$72
	1	-\$18	\$80	\$177	\$275	\$372
	1.5	\$88	\$234	\$380	\$526	\$672
	2	\$193	\$388	\$582	\$777	\$972

MEDIUM RAINFALL

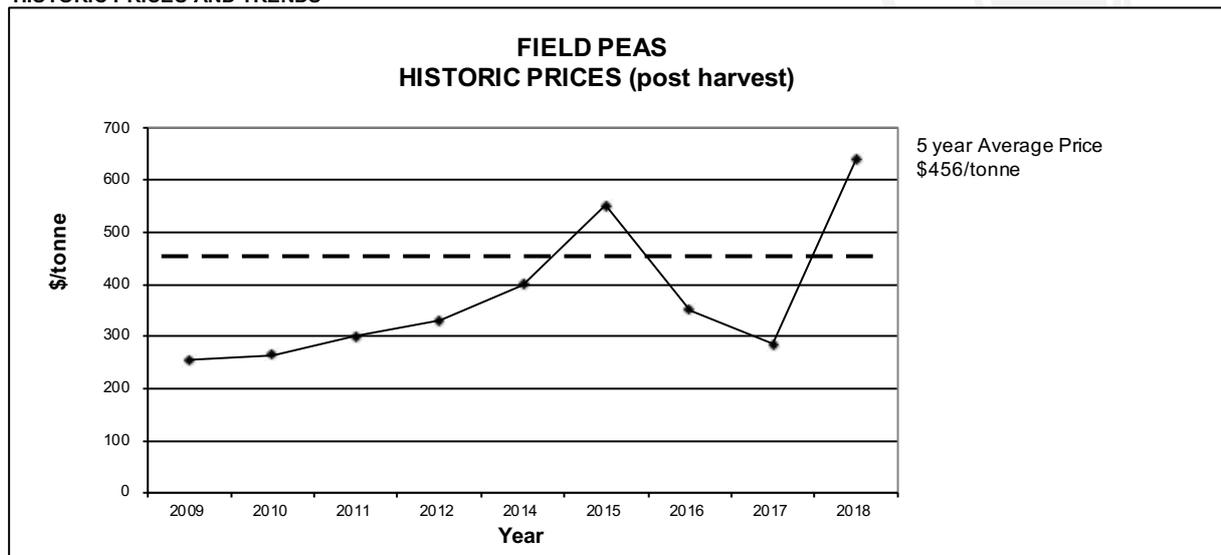
		Net Price \$/t				
		\$250	\$350	\$450	\$550	\$650
Yield t/ha	1	-\$58	\$39	\$137	\$234	\$332
	1.7	\$89	\$255	\$420	\$586	\$752
	2	\$152	\$347	\$542	\$737	\$932
	2.5	\$258	\$501	\$745	\$988	\$1,232

HIGH RAINFALL

		Net Price \$/t				
		\$250	\$350	\$450	\$550	\$650
Yield t/ha	1.5	-\$39	\$107	\$253	\$399	\$546
	2	\$66	\$261	\$456	\$651	\$846
	2.5	\$172	\$415	\$659	\$902	\$1,146
	3	\$277	\$569	\$861	\$1,154	\$1,446



HISTORIC PRICES AND TRENDS



Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	9	5.25	3.87
roll	1	1.35	1.72
harvest#	1	20.80	8.60
TOTAL		31.53	19.29

Rates are for low rainfall zone. Extra cost in higher yielding situations

Faba Beans

INCOME										2019 YOUR ESTIMATE
Rainfall Zone				LOW		MEDIUM		HIGH		
Price (19/20 Forecast)				\$600		\$600		\$600		
Quality Fie Grade 1										
Yield (t/ha)				0.8		1.6		2.8		
GROSS INCOME				\$480		\$960		\$1,680		
VARIABLE COSTS										
				Rate/ha Low		Rate/ha Medium		Rate/ha High		
Cost				\$/ha		\$/ha		\$/ha		
Seed										
Seed	\$0.90 /kg	@	100	\$90.00	110	\$99.00	130	\$117.00		
Seed Inoculant	\$0.05 /kg	@	100	\$5.00	110	\$5.50	130	\$6.50		
Levies										
GRDC Levies	1.0% Gross Income			\$4.80		\$9.60		\$16.80		
EPR & state levies	\$4.00 /tonne sold			\$3.20		\$6.40		\$11.20		
Fertiliser (Bulk)										
MAP	\$685 /tonne	@	40	\$27.40	60	\$41.10	80	\$54.80		
Chemicals-Herbicides										
Summer Weed Control Various Allow				\$25.00		\$25.00		\$25.00		
Pre-emergents										
Glyphosate 540	\$6.30 /litre	@	1.2	\$7.56	1.2	\$7.56	1.2	\$7.56		
Carfentrazone 400g/L	\$166.00 /litre	@	0.02	\$3.32	0.02	\$3.32	0.02	\$3.32		
Propyzamide	\$19.94 /litre	@	1	\$19.94	1	\$19.94	1	\$19.94		
Simazine 900g/kg	\$7.60 /kg	@	0.83	\$6.31	0.83	\$6.31	0.83	\$6.31		
Post-emergents										
Clethodim (incl Oil)	\$13.25 /litre	@	0.5	\$8.95	0.5	\$8.95	0.5	\$8.95		
Haloxypop 520g/L	\$45.60 /litre	@	0.04	\$1.82	0.04	\$1.82				
Factor	\$0.12 /gm						180	\$21.60		
Paraquat (Desiccant)	\$5.88 /litre	@	0.8	\$4.70	0.8	\$4.70	0.8	\$4.70		
Insecticides										
Chlorpyrifos (1)	\$8.20 /litre	@	0.14	\$1.15	0.14	\$1.15	0.14	\$1.15		
Karate Zeon® (2)	\$85.00 /litre	@	0.024	\$2.04	0.024	\$2.04	0.024	\$2.04		
Dimethoate (3)	\$9.40 /litre	@	0.5	\$4.70	0.5	\$4.70	0.5	\$4.70		
Fungicides										
Tebuconazole(4)	\$14.80 /litre	@		\$0.00	0.3	\$4.44	0.3	\$4.44		
Mancozeb-low r/f	\$9.34 /kg	@	1.7	\$15.88	0	\$0.00	0	\$0.00		
Mancozeb-Med/high	\$9.34 /kg	@	0	\$0.00	5.1	\$47.63	5.1	\$47.63		
Procymidone	\$24.80 /litre	@		\$0.00		\$0.00	0.5	\$12.40		
Carbendazim 2 applic	\$11.80 /litre	@			0.5	\$5.90	1	\$11.80		
Operations										
Fuel & Oil				\$16.56		\$19.87		\$23.19		
Repairs & Maintenance				\$22.97		\$27.56		\$32.15		
Freight										
Grain (t)	\$30.00 /tonne	@	0.8	\$24.00	1.6	\$48.00	2.8	\$84.00		
Fertiliser (t)	\$25.00 /tonne	@	0.04	\$1.00	0.06	\$1.50	0.08	\$2.00		
Contract Work										
Aerial spraying	\$14.00 /ha	@		\$0.00	1	\$14.00	1	\$14.00		
Insurance	\$12.00 /\$1000	@		\$5.76		\$11.52		\$20.16		
TOTAL VARIABLE COSTS				\$302		\$428		\$563		
GROSS MARGIN/hectare				\$178		\$532		\$1,117		
Break Even Price (to cover variable costs only)				\$378		\$267		\$201		
Break Even Yield (to cover variable costs only)				0.50		0.71		0.94		
Gross Margin based on last 5 year average price				\$104		\$384		\$856		

COMMENTS

- (1) RLEM control
- (2) Native Budworm control
- (3) Cow pea aphid
- (4) Cercospora Mancozeb for Ascochyta. Procymidone and Carbendazim for chocolate spot

AGRONOMIC NOTES

No allowance is made in this gross margin as to the economic benefit of bean stubble to livestock.

GROSS MARGIN SENSITIVITY LOW RAINFALL

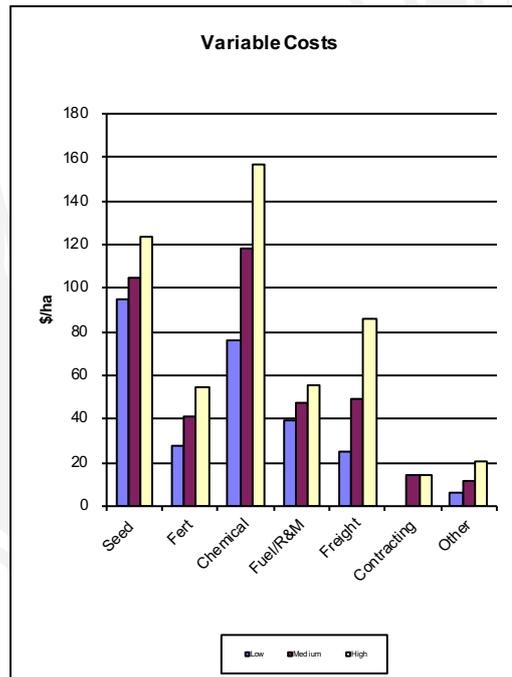
		Net Price \$/t				
		\$400	\$500	\$600	\$700	\$800
Yield t/ha	0.4	-\$121	-\$82	-\$43	-\$4	\$35
	0.8	\$21	\$100	\$178	\$256	\$334
	1.5	\$271	\$418	\$565	\$712	\$858
	2	\$450	\$646	\$841	\$1,037	\$1,232

MEDIUM RAINFALL

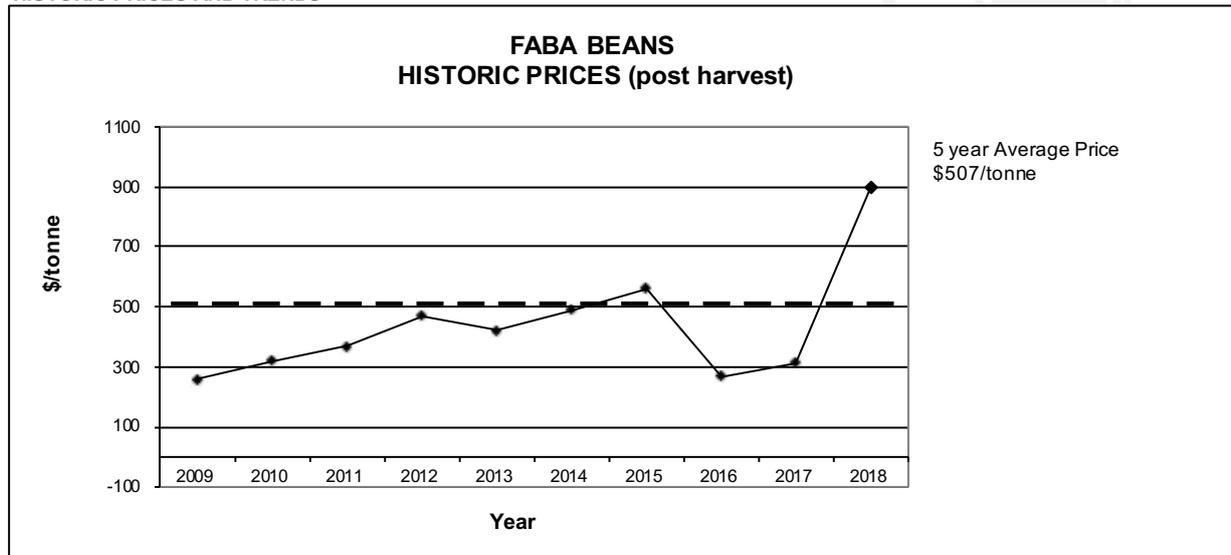
		Net Price \$/t				
		\$400	\$500	\$600	\$700	\$800
Yield t/ha	1	\$5	\$103	\$201	\$299	\$396
	1.6	\$220	\$376	\$532	\$689	\$845
	2	\$362	\$558	\$754	\$949	\$1,145
	2.5	\$541	\$785	\$1,030	\$1,274	\$1,519

HIGH RAINFALL

		Net Price \$/t				
		\$400	\$500	\$600	\$700	\$800
Yield t/ha	1	-\$74	\$24	\$122	\$219	\$317
	2	\$283	\$479	\$674	\$870	\$1,066
	2.8	\$569	\$843	\$1,117	\$1,390	\$1,664
	4	\$998	\$1,389	\$1,780	\$2,171	\$2,562



HISTORIC PRICES AND TRENDS



Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	10	5.83	4.30
harvest#	1	13.00	7.17
TOTAL		22.97	16.56

Rates are for low rainfall zone. Extra cost in higher yielding situations

Chickpeas

INCOME							2019 YOUR ESTIMATE		
							LOW	MEDIUM	HIGH
Rainfall Zone									
Price (19/20 Forecast)							\$750	\$750	\$750
Quality 6-8 mm Kabuli									
Yield (t/ha)							0.7	1.1	1.6
GROSS INCOME							\$525	\$825	\$1,200
VARIABLE COSTS									
							Rate/ha	Rate/ha	Rate/ha
Seed							Low	Medium	High
Seed	Cost			\$/ha		\$/ha		\$/ha	
Seed	\$0.73 /kg	@	90	\$65.70	100	\$73.00	110	\$80.30	
Seed Inoculant	\$50.00 /tonne	@	90	\$4.50	100	\$5.00	110	\$5.50	
P-Pickel	\$68.00 /tonne	@	90	\$6.12	100	\$6.80	110	\$7.48	
Levies									
GRDC Levies	1.0% Gross Income			\$5.25		\$8.25		\$12.00	
EPR & state levies	\$5.50 /tonne sold			\$3.85		\$6.05		\$8.80	
Fertiliser (Bulk)									
MAP	\$685 /tonne	@	40	\$27.40	60	\$41.10	80	\$54.80	
Chemicals-Herbicides									
Summer Weed Control	Various	Allow		\$25.00		\$25.00		\$25.00	
Pre-emergents									
Propyzamide	\$19.94 /litre	@	1	\$19.94	1	\$19.94	1	\$19.94	
Glyphosate 540	\$6.30 /litre	@	1.2	\$7.56	1.2	\$7.56	1.2	\$7.56	
Carfentrazone 400g/L	\$166.00 /litre	@	0.02	\$3.32	0.02	\$3.32	0.02	\$3.32	
Balance®	\$0.15 /gram	@	75	\$11.25	100	\$15.00	100	\$15.00	
Metribuzin 750 gm/kg	\$31.20 /kg	@	0.18	\$5.62	0.24	\$7.49	0.3	\$9.36	
Post-emergents									
Clethodim (incl Oil)	\$13.25 /litre	@	0.5	\$8.95	0.5	\$8.95	0.5	\$8.95	
Haloxypop 520g/L	\$45.60 /litre	@	0.04	\$1.82	0.04	\$1.82			
Factor	\$0.12 /gm						180	\$21.60	
Insecticides									
Chlorpyrifos (RLEM)	\$8.20 /litre	@	0.14	\$1.15	0.14	\$1.15	0.14	\$1.15	
Karate Zeon®	\$85.00 /litre	@	0.024	\$2.04	0.024	\$2.04	0.024	\$2.04	
Fungicides									
Aviator Xpro	\$54.50 /litre	@	0.0	\$0.00	0.6	\$32.70	1.2	\$65.40	
Chlorothalonil	\$12.40 /litre	@	1.6	\$19.84	1.6	\$19.84	1.6	\$19.84	
Carbendazim	\$11.80 /litre	@		\$0.00		\$0.00	0.5	\$5.90	
Desiccation									
Paraquat	\$5.88 /litre	@	0.8	\$4.70	0.8	\$4.70	0.8	\$4.70	
Operations									
Fuel & Oil				\$16.56		\$19.87		\$23.19	
Repairs & Maintenance				\$22.97		\$27.56		\$32.15	
Freight									
Grain (t)	\$30.00 /tonne	@	0.7	\$21.00	1.1	\$33.00	1.6	\$48.00	
Fertiliser (t)	\$25.00 /tonne	@	0.04	\$1.00	0.06	\$1.50	0.08	\$2.00	
Contract Work									
Aerial spraying	\$14.00 /ha	@		\$0.00		\$0.00		\$0.00	
Windrowing	\$38.00 /ha	@		\$0.00	0	\$0.00	0	\$0.00	
Insurance	\$10.00 /\$1000	@		\$5.25		\$8.25		\$12.00	
Other	\$0.00 /ha								
	\$0.00 /ha								
TOTAL VARIABLE COSTS							\$291	\$380	\$496
GROSS MARGIN/hectare							\$234	\$445	\$704
Break Even Price (to cover variable costs only)							\$415	\$345	\$310
Break Even Yield (to cover variable costs only)							0.39	0.51	0.66
Gross Margin based on last 5 year average price							\$362	\$645	\$995

COMMENTS

Seed is inoculated with a Group N inoculant. Do not exceed 800ml/ Ha Paraquat 250 when desiccating to avoid possible residue issues

AGRONOMIC NOTES

Price is heavily dependant on grade and quality. Seek advice. May need to store product for up to 12 months before marketing

GROSS MARGIN SENSITIVITY LOW RAINFALL

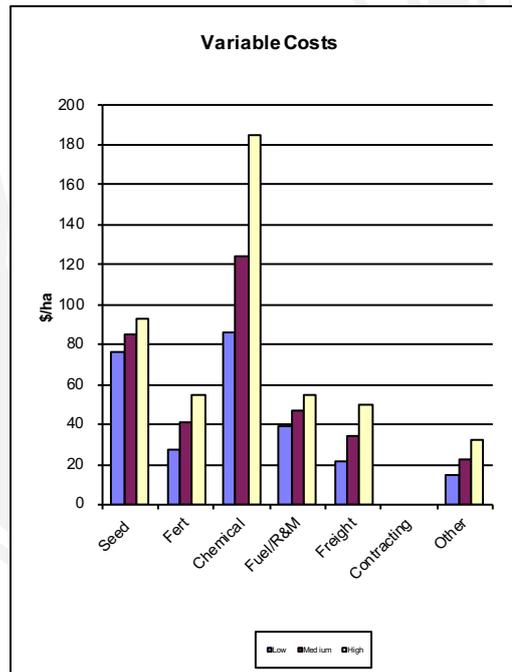
		Net Price \$/t				
		\$550	\$650	\$750	\$850	\$950
Yield t/ha	0.4	-\$54	-\$15	\$24	\$64	\$103
	0.7	\$97	\$166	\$234	\$303	\$371
	1.2	\$349	\$466	\$584	\$702	\$819
	1.8	\$651	\$827	\$1,004	\$1,180	\$1,356

MEDIUM RAINFALL

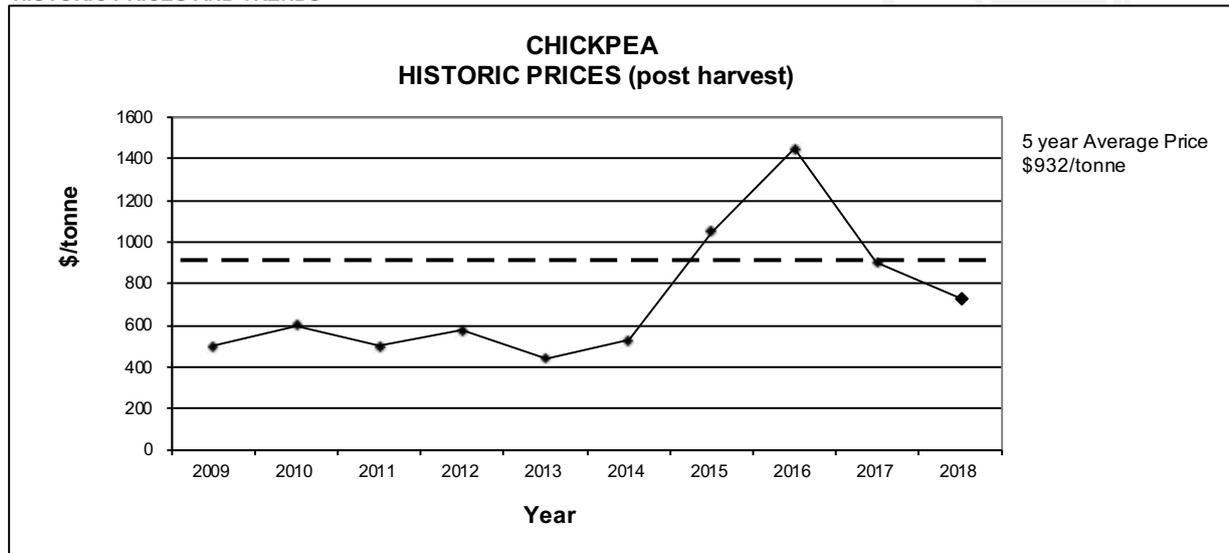
		Net Price \$/t				
		\$550	\$650	\$750	\$850	\$950
Yield t/ha	0.5	-\$73	-\$24	\$25	\$74	\$123
	1.1	\$230	\$337	\$445	\$553	\$661
	1.8	\$582	\$758	\$935	\$1,111	\$1,288
	2.3	\$834	\$1,059	\$1,285	\$1,510	\$1,735

HIGH RAINFALL

		Net Price \$/t				
		\$550	\$650	\$750	\$850	\$950
Yield t/ha	1	\$88	\$186	\$284	\$382	\$480
	1.5	\$340	\$487	\$634	\$781	\$928
	1.6	\$390	\$547	\$704	\$861	\$1,018
	2.5	\$844	\$1,089	\$1,334	\$1,579	\$1,824



HISTORIC PRICES AND TRENDS



Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	10	5.83	4.30
harvest#	1	13.00	7.17
TOTAL		22.97	16.56

Rates are for low rainfall zone. Extra cost in higher yielding situations

Canola - Conventional

										2019 YOUR ESTIMATE			
INCOME													
										LOW	MEDIUM	HIGH	
										\$530	\$530	\$530	
Price (19/20 Forecast)													
Quality 42% oil													
Yield (t/ha)										0.8	1.5	2.2	
GROSS INCOME										\$424	\$795	\$1,166	
VARIABLE COSTS													
										Rate/ha Low	Rate/ha Medium	Rate/ha High	
Cost										\$/ha	\$/ha	\$/ha	
Seed													
Seed	\$25.00 /kg	@	1	\$25.00	1.5	\$37.50	2	\$50.00					
Levies													
GRDC Levies	1.0% Gross Income			\$4.24		\$7.95		\$11.66					
State levies	\$0.50 /tonne sold			\$0.40		\$0.75		\$1.10					
Fertiliser (Bulk)													
18:20:0	\$685 /tonne	@	35	\$23.98	55	\$37.68	75	\$51.38					
Flutriafol (on fert)	\$26.00 /litre	@	0.2	\$5.20	0.2	\$5.20	0.2	\$5.20					
Urea	\$540 /tonne	@	50	\$27.00	100	\$54.00	150	\$81.00					
SOA	\$365 /tonne	@	50	\$18.25	50	\$18.25	100	\$36.50					
Chemicals-Herbicides													
Summer Weed Control	Various	Allow		\$25.00		\$25.00		\$25.00					
Pre-emergents													
Glyphosate 540	\$6.30 /litre	@	1.2	\$7.56	1.2	\$7.56	1.2	\$7.56					
Carfentrazone 400g/L	\$166.00 /litre	@	0.02	\$3.32	0.02	\$3.32	0.02	\$3.32					
Propyzamide	\$19.94 /litre	@	1	\$19.94	1	\$19.94	1	\$19.94					
Trifluralin 480g/L	\$5.24 /litre	@	1.5	\$7.86	2	\$10.48	2	\$10.48					
Post-emergents													
Haloxypop 520g/L	\$45.60 /litre	@	0.04	\$1.82	0.04	\$1.82	0.04	\$1.82					
Clethodim(incl Oil)	\$13.25 /litre	@	0.5	\$8.95	0.5	\$8.95	0.5	\$8.95					
Clopyralid 600g/L	\$38.28 /litre	@	0.075	\$2.87	0.075	\$2.87	0.075	\$2.87					
Glypho (pre-harvest) (4)	\$6.30 /litre	@	2	\$12.60	2	\$12.60	2	\$12.60					
Insecticides													
Chlorpyrifos 500g/L	\$8.20 /litre	@	0.5	\$4.10	0.5	\$4.10	0.5	\$4.10					
Talstar	\$29.60 /litre	@	0.04	\$1.18	0.04	\$1.18	0.04	\$1.18					
Transform (1)	\$155.00 /litre	@	0.1	\$15.50	0.1	\$15.50	0.1	\$15.50					
Karate Zeon®(2)	\$85.00 /litre	@	0.024	\$2.04		\$0.00		\$0.00					
Affirm (3)	\$155.00 /litre	@	0	\$0.00	0.3	\$46.50	0.3	\$46.50					
Operations													
Fuel & Oil				\$15.97		\$19.16		\$22.36					
Repairs & Maintenance				\$19.84		\$23.80		\$27.77					
Freight													
Grain (t)	\$30.00 /tonne	@	0.8	\$24.00	1.5	\$45.00	2.2	\$66.00					
Fertiliser (t)	\$25.00 /tonne	@	0.135	\$3.38	0.205	\$5.13	0.325	\$8.13					
Contract Work													
Aerial spraying	\$14.00 /ha	@		\$0.00	1	\$14.00	1	\$14.00					
Windrowing	\$38.00 /ha	@		\$0.00	1	\$38.00	1	\$38.00					
Insurance	\$12.00 /\$1000	@		\$5.09		\$9.54		\$13.99					
Urea spreading	\$8.50 /ha	@	1	\$8.50	2	\$17.00	2	\$17.00					
TOTAL VARIABLE COSTS										\$294	\$493	\$604	
GROSS MARGIN/hectare										\$130	\$302	\$562	
Break Even Price (to cover variable costs only)										\$367	\$329	\$275	
Break Even Yield (to cover variable costs only)										0.55	0.93	1.14	
Gross Margin based on last 5 year average price										\$116	\$275	\$522	

COMMENTS

- (1) Green Peach Aphid
- (2) Native Budworm-Low rainfall
- (3) DBM and Native Budworm
- (4) Weedmaster DST registered for this purpose

AGRONOMIC NOTES

A maximum of 15 units of nitrogen and 10 units of phosphorus should be applied with seed. Nitrogen rate dependent on target yield. Sulphur required on sandy, neutral/acid soils and intensive cropping systems. Ensure insect control and good seed/soil contact when sowing. Assumes direct heading in low rainfall/ yielding situations. Direct heading is becoming more widely used in all zones.

In low rainfall situations, oil penalties may apply- conversely oil bonuses may be expected in high rainfall areas

GROSS MARGIN SENSITIVITY

LOW RAINFALL

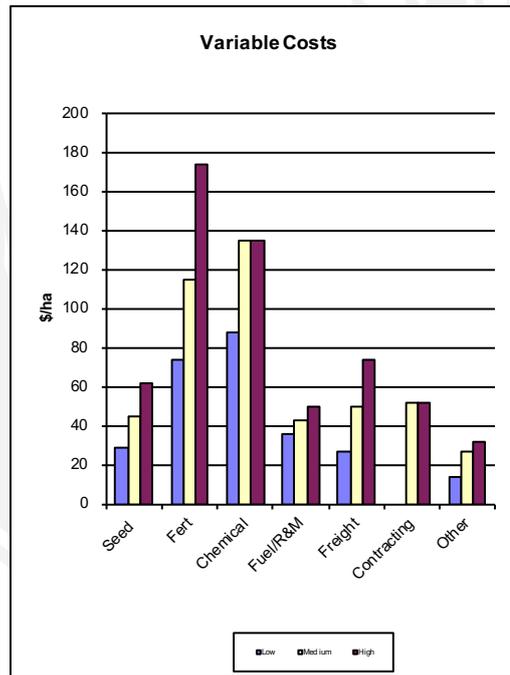
		Net Price \$/t				
		\$450	\$500	\$530	\$600	\$650
Yield t/ha	0.3	-\$137	-\$122	-\$114	-\$93	-\$78
	0.8	\$68	\$107	\$130	\$185	\$224
	1.1	\$191	\$244	\$277	\$352	\$406
	1.5	\$355	\$428	\$472	\$575	\$648

MEDIUM RAINFALL

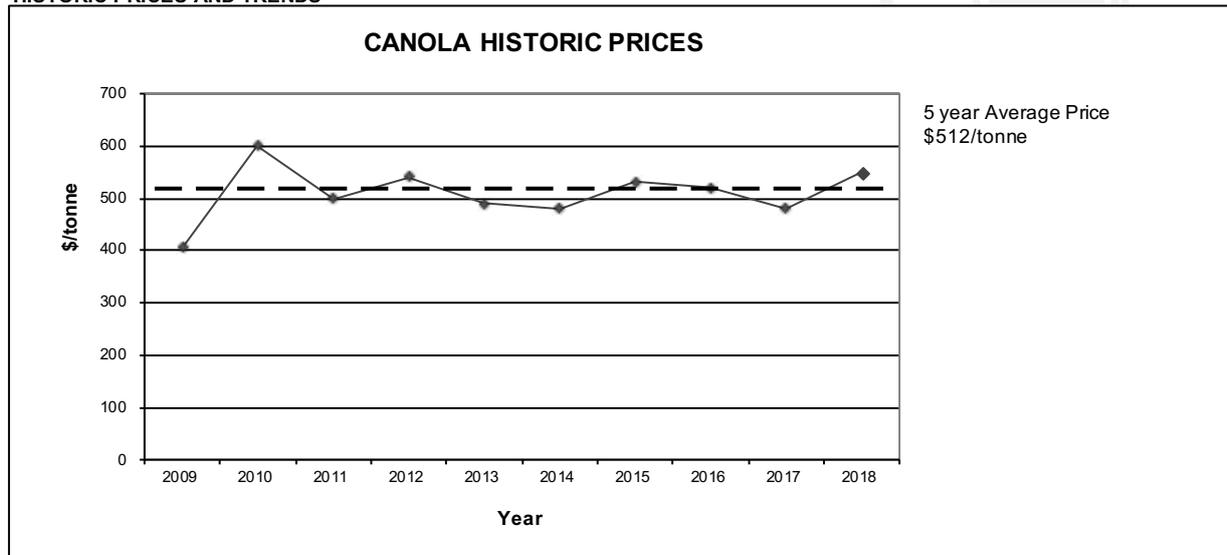
		Net Price \$/t				
		\$450	\$500	\$530	\$600	\$650
Yield t/ha	0.7	-\$143	-\$109	-\$88	-\$40	-\$6
	1.5	\$185	\$258	\$302	\$405	\$478
	2	\$390	\$487	\$546	\$683	\$781
	2.5	\$594	\$717	\$790	\$961	\$1,083

HIGH RAINFALL

		Net Price \$/t				
		\$450	\$500	\$530	\$600	\$650
Yield t/ha	1	-\$102	-\$53	-\$23	\$45	\$94
	1.5	\$103	\$177	\$221	\$323	\$397
	2.2	\$390	\$498	\$562	\$713	\$820
	3	\$718	\$864	\$952	\$1,158	\$1,304



HISTORIC PRICES AND TRENDS



Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	11	6.42	4.73
harvest#	1	9.29	6.14
TOTAL		19.84	15.97

Rates are for low rainfall zone. Extra cost in higher yielding situations

Canola - Triazine Tolerant

										2019 YOUR ESTIMATE
INCOME										
				<i>Rainfall Zone</i>						
				LOW		MEDIUM		HIGH		
Price (19/20 Forecast)				\$530		\$530		\$530		
Quality 42% oil										
Yield (t/ha)				0.7		1.3		2		
GROSS INCOME				\$371		\$689		\$1,060		
VARIABLE COSTS										
				Rate/ha		Rate/ha		Rate/ha		
Cost				Low	\$/ha	Medium	\$/ha	High	\$/ha	
Seed										
Seed	\$25.00 /kg	@	1.5	\$37.50	2	\$50.00	2.5	\$62.50		
Levies										
GRDC Levies	1.0% Gross Income			\$3.71		\$6.89		\$10.60		
State levies	\$0.50 /tonne sold			\$0.35		\$0.65		\$1.00		
Fertiliser (Bulk)										
18:20:0	\$685 /tonne	@	35	\$23.98	55	\$37.68	75	\$51.38		
Flutriafol (on fert)	\$26.00 /litre	@	0.2	\$5.20	0.2	\$5.20	0.2	\$5.20		
Urea	\$540 /tonne	@	40	\$21.60	80	\$43.20	120	\$64.80		
SOA	\$365 /tonne	@	50	\$18.25	50	\$18.25	100	\$36.50		
Chemicals-Herbicides										
Summer Weed Control	Various Allow			\$25.00		\$25.00		\$25.00		
Pre-emergents										
Atrazine (900 g/kg)	\$7.80 /kg	@	1.1	\$8.58	1.1	\$8.58	1.1	\$8.58		
Trifluralin 480g/L	\$5.24 /litre	@	1.5	\$7.86	2	\$10.48	2	\$10.48		
Glyphosate 540	\$6.30 /litre	@	1.2	\$7.56	1.2	\$7.56	1.2	\$7.56		
Carfentrazone 400g/L	\$166.00 /litre	@	0.02	\$3.32	0.02	\$3.32	0.02	\$3.32		
Propyzamide	\$19.94 /litre	@	1	\$19.94	1	\$19.94	1	\$19.94		
Post-emergents										
Clethodim (incl Oil)	\$13.25 /litre	@	0.5	\$8.95	0.5	\$8.95	0.5	\$8.95		
Haloxypop 520g/L	\$45.60 /litre	@	0.04	\$1.82	0.04	\$1.82	0.04	\$1.82		
Clopyralid 600g/L	\$38.28 /litre	@	0.075	\$2.87	0.075	\$2.87	0.075	\$2.87		
Glypho (pre-harvest) (4)	\$6.30 /litre	@	2	\$12.60	2	\$12.60	2	\$12.60		
Insecticides										
Chlorpyrifos 500g/L	\$8.20 /litre	@	0.5	\$4.10	0.5	\$4.10	0.5	\$4.10		
Talstar	\$29.60 /litre	@	0.04	\$1.18	0.04	\$1.18	0.04	\$1.18		
Transform (1)	\$155.00 /litre	@	0.1	\$15.50	0.1	\$15.50	0.1	\$15.50		
Karate Zeon®(2)	\$85.00 /litre	@	0.024	\$2.04		\$0.00		\$0.00		
Affirm (3)	\$155.00 /litre	@	0	\$0.00	0.3	\$46.50	0.3	\$46.50		
Operations										
Fuel & Oil				\$15.97		\$19.16		\$22.36		
Repairs & Maintenance				\$19.84		\$23.80		\$27.77		
Freight										
Grain (t)	\$30.00 /tonne	@	0.7	\$21.00	1.3	\$39.00	2	\$60.00		
Fertiliser (t)	\$25.00 /tonne	@	0.125	\$3.13	0.185	\$4.63	0.295	\$7.38		
Contract Work										
Aerial spraying	\$14.00 /ha	@		\$0.00	1	\$14.00	1	\$14.00		
Windrowing	\$38.00 /ha	@		\$0.00	1	\$38.00	1	\$38.00		
Insurance	\$12.00 /\$1000	@		\$4.45		\$8.27		\$12.72		
Urea spreading	\$8.50 /ha	@	1	\$8.50	2	\$17.00	2	\$17.00		
TOTAL VARIABLE COSTS				\$305		\$494		\$600		
GROSS MARGIN/hectare				\$66		\$195		\$460		
Break Even Price (to cover variable costs only)				\$435		\$380		\$300		
Break Even Yield (to cover variable costs only)				0.58		0.93		1.13		
Gross Margin based on last 5 year average price				\$54		\$171		\$424		

COMMENTS

- (1) Green Peach Aphid
- (2) Native Budworm-Low rainfall
- (3) DBM and Native Budworm.
- (4) Weedmaster DST registered for this purpose

AGRONOMIC NOTES

A maximum of 15 units of nitrogen and 10 units of phosphorus should be applied with seed. Nitrogen rate dependent on target yield. Sulphur required on sandy, neutral/acid soils and intensive cropping systems. Ensure insect control and good seed/soil contact when sowing. Assumes direct heading in low rainfall/ yielding situations. Direct heading is becoming more widely used in all zones.

In low rainfall situations, oil penalties may apply- conversely oil bonuses may be expected in high rainfall areas.

GROSS MARGIN SENSITIVITY

LOW RAINFALL

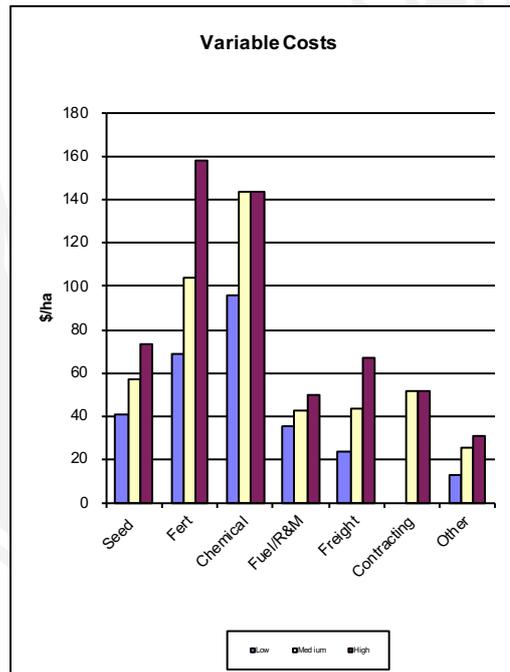
		Net Price \$/t				
		\$450	\$500	\$530	\$600	\$650
Yield t/ha	0.3	-\$152	-\$138	-\$129	-\$108	-\$94
	0.7	\$11	\$46	\$66	\$114	\$148
	1.1	\$175	\$229	\$261	\$337	\$390
	1.5	\$339	\$412	\$456	\$559	\$633

MEDIUM RAINFALL

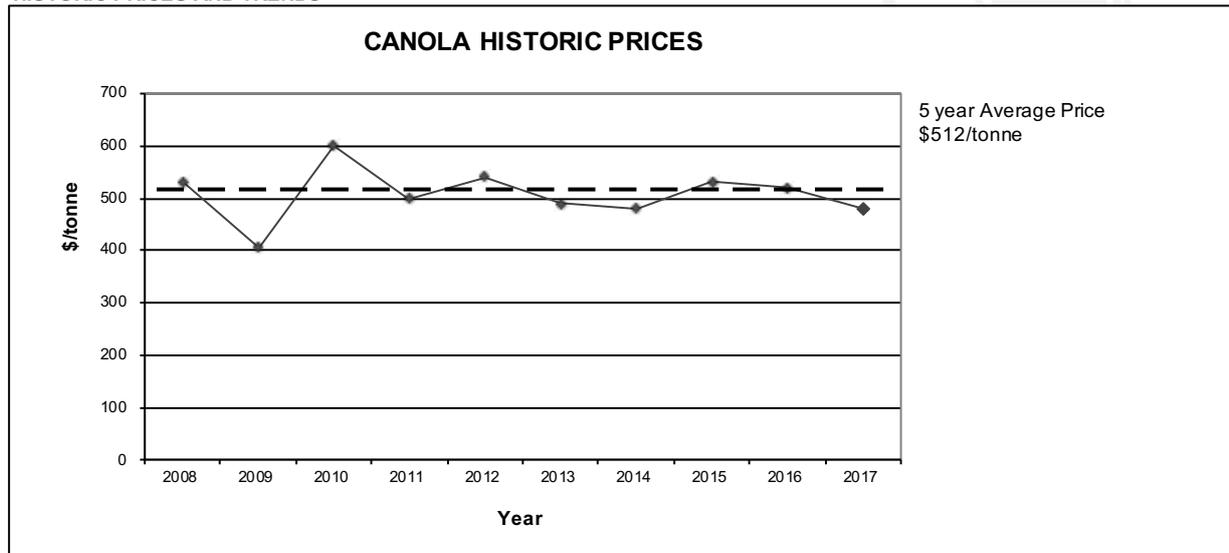
		Net Price \$/t				
		\$450	\$500	\$530	\$600	\$650
Yield t/ha	0.7	-\$153	-\$118	-\$98	-\$50	-\$16
	1.3	\$93	\$157	\$195	\$284	\$347
	2	\$380	\$478	\$536	\$673	\$771
	2.5	\$585	\$707	\$780	\$951	\$1,074

HIGH RAINFALL

		Net Price \$/t				
		\$450	\$500	\$530	\$600	\$650
Yield t/ha	1	-\$106	-\$57	-\$27	\$41	\$90
	1.5	\$99	\$172	\$216	\$319	\$393
	2	\$304	\$402	\$460	\$597	\$695
	2	\$304	\$402	\$460	\$597	\$695



HISTORIC PRICES AND TRENDS



Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	11	6.42	4.73
harvest#	1	9.29	6.14
TOTAL		19.84	15.97

Rates are for low rainfall zone. Extra cost in higher yielding situations

GROSS MARGIN SENSITIVITY

LOW RAINFALL

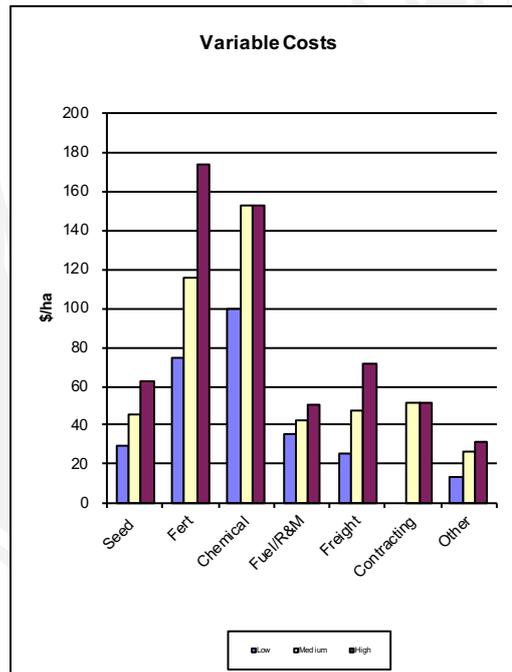
		Net Price \$/t				
		\$450	\$500	\$530	\$600	\$650
Yield t/ha	0.3	-\$149	-\$135	-\$126	-\$105	-\$91
	0.75	\$35	\$72	\$94	\$145	\$182
	1.1	\$178	\$232	\$264	\$340	\$393
	1.5	\$342	\$415	\$459	\$562	\$636

MEDIUM RAINFALL

		Net Price \$/t				
		\$450	\$500	\$530	\$600	\$650
Yield t/ha	0.7	-\$162	-\$127	-\$107	-\$59	-\$25
	1.4	\$125	\$194	\$235	\$331	\$399
	2	\$371	\$469	\$527	\$664	\$762
	2.5	\$576	\$698	\$771	\$943	\$1,065

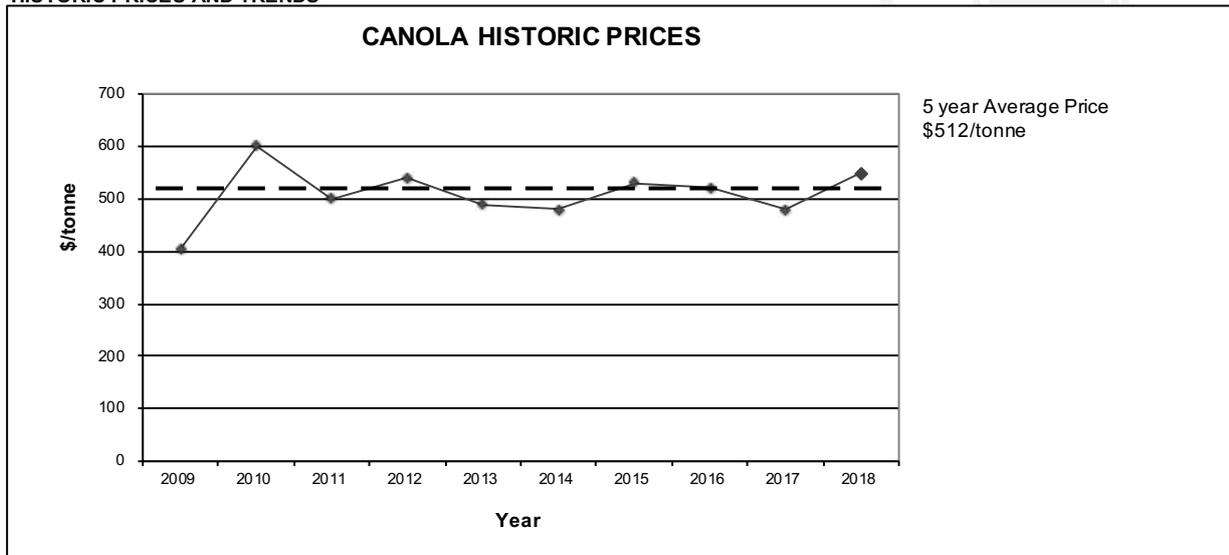
HIGH RAINFALL

		Net Price \$/t				
		\$450	\$500	\$530	\$600	\$650
Yield t/ha	1	-\$120	-\$72	-\$42	\$26	\$75
	1.5	\$84	\$158	\$202	\$304	\$378
	2.1	\$330	\$433	\$494	\$638	\$741
	2.7	\$576	\$708	\$787	\$972	\$1,104



HISTORIC PRICES AND TRENDS

CANOLA HISTORIC PRICES



Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	11	6.42	4.73
harvest#	1	9.29	6.14
TOTAL		19.84	15.97

Rates are for low rainfall zone. Extra cost in higher yielding situations

Sown Pasture Vetch

							2019 YOUR ESTIMATE	
INCOME		Rainfall Zone			LOW	MEDIUM	HIGH	
Carrying Capacity (dry sheep equivalents winter grazed)					4	7	10	
Estimated return per dse based on self replacing Merino Ewe flock (Cereal Zone)					\$79.00	\$79.00	\$76.00	
GROSS INCOME					\$316	\$553	\$760	
VARIABLE COSTS		Rate/ha		Rate/ha		Rate/ha		
Cost		Low	\$/ha	Medium	\$/ha	High		
Seed								
Seed	\$0.70 /kg	@	25	\$17.50	35	\$24.50	50	\$35.00
Seed Inoculant	\$0.05 /kg	@	25	\$1.25	35	\$1.75	50	\$2.50
Levies								
				\$0.00		\$0.00		\$0.00
Fertiliser (Bulk)								
MAP	\$685 /tonne	@	40	\$27.40	60	\$41.10	80	\$54.80
Chemicals-Herbicides								
Pre-emergents								
Glyphosate 540	\$6.30 /litre	@	1.2	\$7.56	1.2	\$7.56	1.2	\$7.56
Carfentrazone 400g/L	\$166.00 /litre	@	0.02	\$3.32	0.02	\$3.32	0.02	\$3.32
Metribuzin 750 gm/kg	\$31.20 /kg	@	0.2	\$6.24	0.25	\$7.80	0.3	\$9.36
Post-emergents								
Clethodim (incl Oil)	\$13.25 /litre	@	0.4	\$7.63	0.5	\$8.95	0.5	\$8.95
Haloxypop 520g/L	\$45.60 /litre	@	0.075	\$3.42	0.075	\$3.42	0.075	\$3.42
Glypho 540 (desiccant)	\$6.30 /litre	@	1.5	\$9.45	1.5	\$9.45	1.5	\$9.45
Insecticides								
Dimethoate (1)	\$9.40 /litre	@	0.4	\$3.76	0.4	\$3.76	0.4	\$3.76
Dimethoate (2)	\$9.40 /litre	@			0.1	\$0.94	0.1	\$0.94
Operations								
Fuel & Oil				\$6.82		\$6.82		\$6.82
Repairs & Maintenance				\$6.47		\$6.47		\$6.47
Freight								
Grain (t)				\$0.00		\$0.00		\$0.00
Fertiliser (t)	\$25.00 /tonne	@	0.04	\$1.00	0.06	\$1.50	0.08	\$2.00
Contract Work								
Aerial spraying								
Insurance	/\$1000	@		\$0.00		\$0.00		\$0.00
Other								
TOTAL VARIABLE COSTS					\$102	\$127	\$154	
GROSS MARGIN/hectare					\$214	\$426	\$606	

COMMENTS

Seed is not treated with a fungicide or graded.

(1) Cow pea aphid

(2) RLEM

AGRONOMIC NOTES

GROSS MARGIN SENSITIVITY

LOW RAINFALL

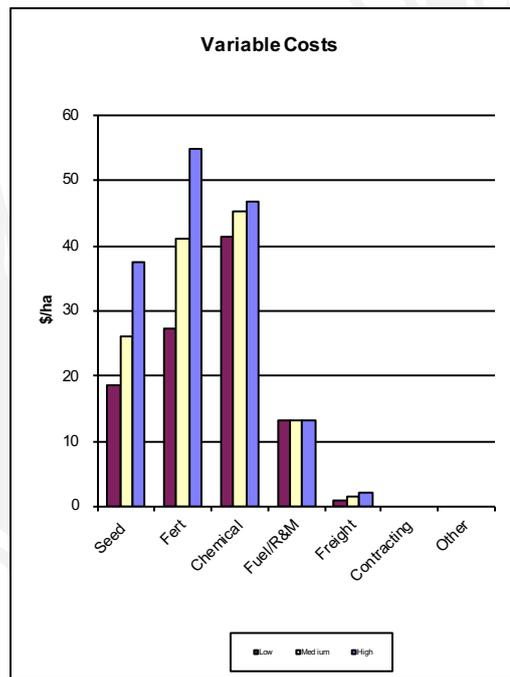
		GM/dse				
		\$70	\$75	\$79	\$85	\$90
	2	\$38	\$48	\$56	\$68	\$78
Carrying	4	\$178	\$198	\$214	\$238	\$258
Capacity	6	\$318	\$348	\$372	\$408	\$438
(dse)	8	\$458	\$498	\$530	\$578	\$618

MEDIUM RAINFALL

		GM/dse				
		\$70	\$75	\$79	\$85	\$90
	3	\$83	\$98	\$110	\$128	\$143
Carrying	5	\$223	\$248	\$268	\$298	\$323
Capacity	7	\$363	\$398	\$426	\$468	\$503
(dse)	9	\$503	\$548	\$584	\$638	\$683

HIGH RAINFALL

		GM/dse				
		\$65	\$70	\$76	\$80	\$85
	4	\$106	\$126	\$150	\$166	\$186
Carrying	7	\$301	\$336	\$378	\$406	\$441
Capacity	10	\$496	\$546	\$606	\$646	\$696
(dse)	12	\$626	\$686	\$758	\$806	\$866



Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	4	2.33	1.72
roll		0.00	0.00
harvest#		0.00	0.00
TOTAL		6.47	6.82

Rates are for low rainfall zone. Extra cost in higher yielding situations

GROSS MARGIN SENSITIVITY LOW RAINFALL

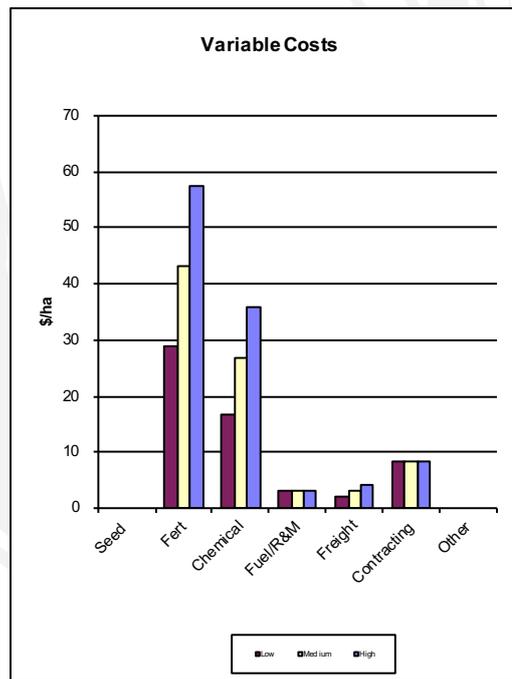
		GM/dse				
		\$70	\$75	\$79	\$85	\$90
	2	\$81	\$91	\$99	\$111	\$121
Carrying	4	\$221	\$241	\$257	\$281	\$301
Capacity	6	\$361	\$391	\$415	\$451	\$481
(dse)	8	\$501	\$541	\$573	\$621	\$661

MEDIUM RAINFALL

		GM/dse				
		\$70	\$75	\$79	\$85	\$90
	3	\$125	\$140	\$152	\$170	\$185
Carrying	5	\$265	\$290	\$310	\$340	\$365
Capacity	7	\$405	\$440	\$468	\$510	\$545
(dse)	9	\$545	\$590	\$626	\$680	\$725

HIGH RAINFALL

		GM/dse				
		\$65	\$70	\$76	\$80	\$85
	4	\$151	\$171	\$195	\$211	\$231
Carrying	7	\$346	\$381	\$423	\$451	\$486
Capacity	10	\$541	\$591	\$651	\$691	\$741
(dse)	12	\$671	\$731	\$803	\$851	\$911



Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	0	0.00	0.00
spray	3	1.75	1.29
roll		0.00	0.00
harvest#		0.00	0.00
TOTAL		1.75	1.29

Rates are for low rainfall zone. Extra cost in higher yielding situations

Dry-land Lucerne Pasture

INCOME		Rainfall Zone		MEDIUM		HIGH		HIGH	2019 YOUR ESTIMATE
				CEREAL		CEREAL		GRAZING	
Carrying Capacity (dry sheep equivalents winter grazed)				6		9		11	
Estimated return per dse based on self replacing Merino Ewe flock (Cereal Zone)				\$79.00		\$76.00		\$76.00	
GROSS INCOME				\$474		\$684		\$836	
ESTABLISHMENT COSTS									
Cost			Rate/ha		Rate/ha		Rate/ha		
			Medium	\$/ha	High C	\$/ha	High Gr		
Seed									
Seed	\$8.00 /kg	@	3	\$24.00	4	\$32.00	4	\$32.00	
Seed Inoculant	\$0.05 /kg	@	3	\$0.15	4	\$0.20	4	\$0.20	
Fertiliser (Bulk)									
MAP	\$685 /tonne	@	60	\$41.10	70	\$47.95	80	\$54.80	
Trace elements	\$3 /kg	@				\$0.00	3	\$9.00	
Chemicals-Herbicides									
Pre-emergents									
Glyphosate 540	\$6.30 /litre	@	1.2	\$7.56	1.2	\$7.56	1.2	\$7.56	
Carfentrazone 400g/L	\$166.00 /litre	@	0.02	\$3.32	0.02	\$3.32	0.02	\$3.32	
Trifluran 480	\$5.24 /kg	@	1	\$5.24	1	\$5.24	1	\$5.24	
Post-emergents - seedling									
Broadstrike	\$0.36 /gm	@	25	\$11.33	25	\$11.33	25	\$11.33	
Haloxypop 520g/L	\$45.60 /litre	@	0.075	\$3.42	0.075	\$3.42	0.075	\$3.42	
Insecticides									
Dimethoate (1)	\$5.00 /litre	@	0.1	\$0.50	0.1	\$0.50	0.1	\$0.50	
Operations									
Fuel & Oil				\$6.39		\$6.39		\$6.39	
Repairs & Maintenance				\$5.88		\$5.88		\$5.88	
Loss of Grazing in first year DSE			3	\$237.00	4	\$304.00	5	\$380.00	
Total Establishment Costs				\$345.88		\$427.78		\$519.63	
Depreciation on establishment costs over 7 years				\$49.41		\$61.11		\$74.23	
VARIABLE COSTS		Established stands							
Herbicides									
Raptor	\$0.50 /kg	@	50	\$25.00	50	\$25.00	50	\$25.00	
Broadstrike	\$0.36 /litre	@	25	\$11.33	25	\$11.33	25	\$11.33	
Insecticides									
Dimethoate (1)	\$9.40 /litre	@	0.1	\$0.94	0.1	\$0.94	0.1	\$0.94	
Dimethoate (2)	\$9.40 /litre	@			0.375	\$3.53	0.375	\$3.53	
Fertiliser (Bulk)									
Superphosphate	\$360 /tonne	@	100	\$36.00	125	\$45.00	150	\$54.00	
Operations									
Fuel & Oil				\$2.58		\$2.58		\$2.58	
Repairs & Maintenance				\$2.52		\$2.52		\$2.52	
Freight									
Grain (t)				\$0.00		\$0.00		\$0.00	
Fertiliser (t)	\$25.00 /tonne	@	0.10	\$2.50	0.13	\$3.13	0.15	\$3.75	
Contract Work									
Aerial spraying				\$0.00		\$0.00		\$0.00	
Insurance	/\$1000	@		\$0.00		\$0.00		\$0.00	
Other									
TOTAL VARIABLE COSTS				\$130		\$155		\$178	
GROSS MARGIN/hectare				\$344		\$529		\$658	

COMMENTS

- (1) RLEM
- (2) RLEM

AGRONOMIC NOTES

GROSS MARGIN SENSITIVITY

MEDIUM RAINFALL

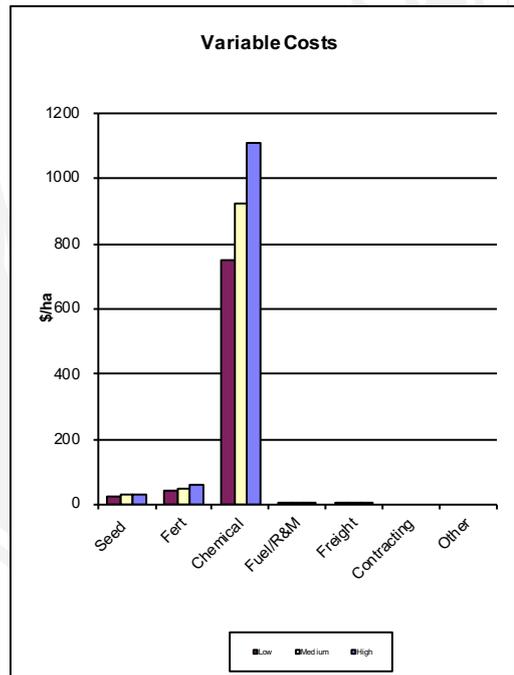
		GM/dse				
		\$70	\$75	\$79	\$85	\$90
	4	\$150	\$170	\$186	\$210	\$230
Carrying Capacity (dse)	6	\$290	\$320	\$344	\$380	\$410
	8	\$430	\$470	\$502	\$550	\$590
	10	\$570	\$620	\$660	\$720	\$770

HIGH RAINFALL CEREAL

		GM/dse				
		\$65	\$70	\$76	\$80	\$85
	5	\$170	\$195	\$225	\$245	\$270
Carrying Capacity (dse)	7	\$300	\$335	\$377	\$405	\$440
	9	\$430	\$475	\$529	\$565	\$610
	11	\$560	\$615	\$681	\$725	\$780

HIGH RAINFALL GRAZING

		GM/dse				
		\$65	\$70	\$76	\$50	\$85
	7	\$277	\$312	\$354	\$172	\$417
Carrying Capacity (dse)	9	\$407	\$452	\$506	\$272	\$587
	11	\$537	\$592	\$658	\$372	\$757
	13	\$667	\$732	\$810	\$472	\$927



Establishment Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	3	1.75	1.29
roll		0.00	0.00
harvest#		0.00	0.00
TOTAL		5.88	6.39

Rates are for low rainfall zone. Extra cost in higher yielding situations

Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	0	0.00	0.00
spray	2	1.17	0.86
spreading	1	1.35	1.72
harvest#		0.00	0.00
TOTAL		2.52	2.58

Phalaris sub-clover Pasture

							2019 YOUR ESTIMATE	
INCOME							HIGH	
Rainfall Zone							CEREAL	HIGH
Carrying Capacity (dry sheep equivalents winter grazed)							10	12
Estimated return per dse based on self replacing Merino Ewe flock							\$79	\$76
GROSS INCOME							\$790	\$912
ESTABLISHMENT COSTS								
Cost							Rate/ha Low	Rate/ha Medium
							\$/ha	Rate/ha High
Seed								
Phalaris	\$20.00 /kg	@		1.5	\$30.00	1.5	\$30.00	
Cocksfoot	\$12.00 /kg	@		1	\$12.00	1	\$12.00	
Sub clover	\$10.00 /kg	@		4	\$40.00	4	\$40.00	
Seed Inoculant	\$0.05 /kg	@		4	\$0.20	4	\$0.20	
Fertiliser (Bulk)								
MAP	\$685 /tonne	@		70	\$47.95	80	\$54.80	
Trace elements								
Lime	\$35 /tonne	@		1.5	\$52.50	1.5	\$52.50	
Chemicals-Herbicides								
Pre-emergents								
Glyphosate 540	\$6.30 /litre	@		1.2	\$7.56	1.2	\$7.56	
Carfentrazone 400	\$166.00 /litre	@		0.02	\$3.32	0.02	\$3.32	
Post-emergents								
Bromoxynil 200	\$12.25 /litre	@		1.5	\$18.79	1.5	\$18.79	
	/litre	@		0	\$0.00	0	\$0.00	
Insecticides								
Dimethoate (1)	\$9.40 /litre	@		0.1	\$0.94	0.1	\$0.94	
Dimethoate (2)	\$9.40 /litre	@		0.1	\$0.94	0.1	\$0.94	
Operations								
Fuel & Oil					\$0.00		\$0.00	
Repairs & Maintenance					\$0.00		\$0.00	
Loss of Grazing in first year DSE				3	\$237.00	3.5	\$266.00	
Total Establishment Costs					\$451.20		\$487.05	
Depreciation on establishment costs over 7 years					\$72.19		\$77.93	
VARIABLE COSTS								
Fertiliser (Bulk)								
Superphosphate	\$360 /tonne	@		120	\$43.20	150	\$54.00	
Chemicals-Herbicides								
Tigrex	\$14 /litre	@		0.5	\$7.00	0.75	\$10.50	
Insecticides								
Dimethoate (1)	\$8.45 /litre	@		0.1	\$0.85	0.1	\$0.85	
Operations								
Fuel & Oil					\$0.00		\$0.00	
Repairs & Maintenance					\$0.00		\$0.00	
Freight								
Fertiliser (t)	\$25.00 /tonne	@		0.12	\$3.00	0.15	\$3.75	
Contract Work								
Aerial spraying								
Insurance	/ \$1000	@			\$0.00		\$0.00	
Other								
TOTAL VARIABLE COSTS							\$126	\$147
GROSS MARGIN/hectare							\$664	\$765

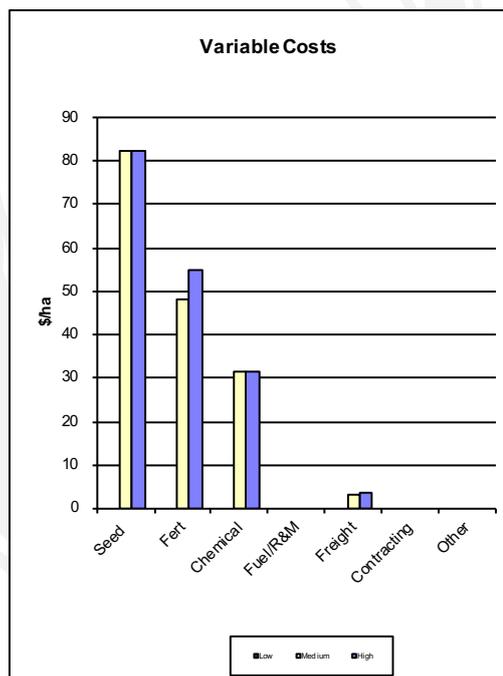
COMMENTS

- (1) RLEM spring
- (2) RLEM

AGRONOMIC NOTES

HIGH RAINFALL CEREAL						
		GM/dse				
		\$70	\$75	\$79	\$85	\$90
	6	\$294	\$324	\$348	\$384	\$414
Carrying	8	\$434	\$474	\$506	\$554	\$594
Capacity	10	\$574	\$624	\$664	\$724	\$774
(dse)	12	\$714	\$774	\$822	\$894	\$954

HIGH RAINFALL GRAZING						
		GM/dse				
		\$65	\$70	\$76	\$80	\$85
	8	\$373	\$413	\$461	\$493	\$533
Carrying	10	\$503	\$553	\$613	\$653	\$703
Capacity	12	\$633	\$693	\$765	\$813	\$873
(dse)	14	\$763	\$833	\$917	\$973	\$1,043



Establishment Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	1	4.13	5.10
spray	3	1.75	1.29
roll		0.00	0.00
harvest#		0.00	0.00
TOTAL		5.88	6.39

Rates are for low rainfall zone. Extra cost in higher yielding situations

Machinery Costs- Assuming full ownership of machinery

(Fuel and repairs only- excludes depreciation and other ownership costs)

Operation	No.	Repairs & Maint \$/ha	Fuel \$/ha
seed	0	0.00	0.00
spray	2	1.17	0.86
spread	1	1.35	1.72
harvest#		0.00	0.00
TOTAL		2.52	2.58

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Prime Lamb – High Rainfall

Assumptions			
Ave Breeding Ewe Fibre Diameter	28	Total DSE's (1)	1840
Number of breeding ewes (First Cross)	1000	Stocking rate (DSE/Ha)	12.0
First cross ewe - Terminal meat sire			

					2019
INCOME					YOUR
					ESTIMATE
					\$
Wool (kg greasy)	3443.5 Kg	[ave price	491 c/kg] (2)		\$18,793
Sales	1339 animals	[ave price	\$158.42 per hd]		\$212,070
GROSS INCOME					\$230,863
VARIABLE COSTS					
Shearing					
Shearing	970 sheep	@	\$310.77 /100		\$3,014
(Federal awards)	19 rams	@	\$621.54 /100		\$118
Shed labour	5 days	@	\$234.80 /day		\$1,174
Woolclasser	2.50 days	@	\$297.79 /day		\$744
Superannuation (on ordinary wages only) (3)		@	9.5% wages		\$480
Work Cover (includes super + o'time etc)		@	4.0% total		\$202
Wool packs	20 packs	@	\$11.20 /pack		\$224
Shed sundries	989 sheep	@	\$0.20 /head		\$198
Lice control	989 sheep	@	\$1.68 /head		\$1,658
Crutch & Wig	990 ewes	@	\$90.12 /100		\$892
	19 rams	@	\$180.24 /100		\$34
Marking					
Lamb marking	1150 lambs	@	\$1.15 /head		\$1,323
Ear tags	1150 lambs	@	\$0.43 /head		\$495
Animal Health					
drench	3190 sheep	@	\$0.60 /head		\$1,914
vaccinate	3320 sheep	@	\$0.33 /head		\$1,089
blowfly control	1000 sheep	@	\$1.44 /head		\$1,440
Stock purchases					
Purchases (refer opposite page)					\$74,016
Sale Costs					
<i>Freight</i>					
livestock	189 culls	@	\$4.00 /head		\$756
	212 ewes	@	\$4.00 /head		\$849
	1150 prime lambs	@	\$4.00 /head		\$4,600
wool	20 bales	@	\$15.00 /bale		\$300
<i>Stock selling charges</i>					
commission/insurance		@	6.0% gross \$		\$12,724
yard fees	1339 head	@	\$0.85 /head		\$1,138
levy-sheep	189 head	@	\$0.20 /head		\$38
levy-lambs	1150 head	@	\$1.50 /head		\$1,725
SA sheep indust	1339 head	@	\$0.55 /head		\$736
<i>Wool selling charges</i>					
brokerage/testing/insurance		@	\$0.27 /kg		\$930
wool levy		@	1.5% gross		\$282
Feed and Other Costs					
hay	20.4 tonne	@	\$260.00 /tonne		\$5,304
grain	24.6 tonnes	@	\$320.00 /tonne		\$7,872
Insurance	\$273,238 value	@	\$2.00 /\$'000		\$546
Water	1840 DSE's	@	\$1.50 /DSE		\$2,760
Veh Fuel, R&M	1840 DSE's	@	\$1.20 /DSE		\$2,208
Other	1840 DSE's	@	\$0.50 /DSE		\$920
TOTAL VARIABLE COSTS					\$132,704
GROSS MARGIN TOTAL					\$98,159
GROSS MARGIN/hectare					\$640
GROSS MARGIN/DSE					\$53

COMMENTS

(1) DSE ratings are based on the maintenance feed requirements of a 2 year old, 50 Kg liveweight Merino Wether with a body condition score of 2.

(2) The wool price is 90% the price for that micron. This takes into account the lower value of bellies, skirtings, locks etc.

(3) Super/workcover expenses relate only to shearing.

No allowance has been made for pasture expenses such as seed, fertiliser and chemicals. These need to be separately accounted for. Refer to pasture Gross Margins.

PRODUCTION DATA

Stocking rate (DSE/Ha)	12.0
Total DSE's	1840
SHEEP GRAZING AREA	153
Number of ewes mated	1000
Ram percentage	2%
Age ewes bought (yrs)	1.5
Age ewes culled	6.5
Years rams kept	3
Flock death rate	3%
Average weaning rate	115%
% Lambs carried over	0%

Culling Rate (% from each group)		
Age group	Ewes	Wethers
0.5	0%	
1.5	0%	
2.5	0%	
3.5	0%	
4.5	0%	
5.5	0%	
6.5	100%	

SALES	Number	Price/hd	Age	Total
c.f.a ewes	182	\$120.00	6.5	\$21,840
c.f.a rams	6	\$80.00	4.5	\$480
lambs	1150	\$165.00	20 weeks	\$189,750
TOTAL	1339	\$158.42		\$212,070
PURCHASES	Number	Price/hd	Age yrs	Total
ewes	212	\$300	1.5	\$63,710
rams	7	\$1,500	1.5	\$10,306

STOCK HEALTH REQUIREMENTS

	Number				
	Number	Drench	Vacc.	Blowfly	DSE
ewes	1000	2	1	1	1.8
rams	20	2	1	0	2
lambs	1150	1	2	0	
TOTAL	2170	3190	3320	1000	1840

SHEARING

	Number	Wool cut	price	Total
		kg/hd		
ewes	970	3.50	\$5.50	\$18,669
crossbred rams	19	2.50	\$2.55	\$124
TOTAL	989	3444		\$18,793

FEEDING

	Number	Hay	Kgs Fed per week	No weeks of Feeding	Total
		Cost (\$/T)			cost (\$)
ewes	1000	\$260	2.5	8	\$5,200
rams	20	\$260	2.5	8	\$104
	Number	Grain	Kgs Fed per week	No weeks of Feeding	Total
		Cost (\$/T)			cost (\$)
ewes	1000	\$320	3.0	8	\$7,680
rams	20	\$320	3.0	10	\$192

G.M. SENSITIVITY

GROSS MARGIN/DSE		Average Weaning Rate (%)					
		95%	105%	115%	125%	135%	145%
	\$140	\$25	\$32	\$39	\$45	\$52	\$59
	\$145	\$28	\$35	\$42	\$48	\$55	\$62
	\$150	\$30	\$37	\$45	\$52	\$59	\$66
	\$155	\$33	\$40	\$47	\$55	\$62	\$70
Average	\$160	\$35	\$43	\$50	\$58	\$66	\$73
Lamb Sale	\$165	\$38	\$45	\$53	\$61	\$69	\$77
Price (\$/hd)	\$170	\$40	\$48	\$56	\$64	\$73	\$81
	\$175	\$42	\$51	\$59	\$68	\$76	\$84
	\$180	\$45	\$53	\$62	\$71	\$79	\$88
	\$185	\$47	\$56	\$65	\$74	\$83	\$92
	\$190	\$50	\$59	\$68	\$77	\$86	\$96

SR Merino - High Rainfall

Assumptions			
Ave Breeding Ewe Fibre Diameter	19	Total DSE's (1)	2390
Number of breeding ewes	1000	Stocking rate (DSE/Ha)	12.0

						2019 YOUR ESTIMATE	
INCOME						\$	
Wool (kg greasy)	9134 Kg	[ave price	1375 c/kg] (2)			\$125,607	
Sales	862 animals	[ave price	\$154.98 per hd]			\$133,640	
GROSS INCOME						\$259,247	
VARIABLE COSTS							
Shearing							
Shearing	2324 sheep	@	\$310.77 /100			\$7,222	
(Federal Awards)	25 rams	@	\$621.54 /100			\$155	
Shed labour	12 days	@	\$234.80 /day			\$2,818	
Woolclasser	6 days	@	\$297.79 /day			\$1,787	
Superannuation (on ordinary wages only) (3)		@	9.5% wages			\$1,138	
Work Cover (includes super + o'time etc)		@	4.0% total			\$525	
Wool packs	54 packs	@	\$11.20 /pack			\$605	
Shed sundries	2349 sheep	@	\$0.20 /head			\$470	
Lice Control	2349 sheep	@	\$1.68 /head			\$3,939	
Crutch & wig	1424 sheep	@	\$90.12 /100			\$1,283	
	25 rams	@	\$180.24 /100			\$45	
Marking							
Lamb marking	900 lambs	@	\$1.40 /head			\$1,260	
Pain relief	900 lambs	@	\$0.45 /head			\$405	
Ear tags	900 lambs	@	\$0.43 /head			\$387	
Animal Health							
drench	3900 sheep	@	\$0.60 /head			\$2,340	
vaccinate	3275 sheep	@	\$0.33 /head			\$1,074	
blowfly control	1500 sheep	@	\$1.44 /head			\$2,160	
Sale and Purchase Costs							
Purchases	7 Merino rams	@	\$2,000.00 /head			\$14,000	
Freight	862 sheep	@	\$4.00 /head			\$3,448	
	54 bales	@	\$15.00 /bale			\$810	
<i>Stock selling charges</i>							
commission/insurance		@	6.0% gross			\$8,018	
yard fees	862 head	@	\$0.85 /head			\$733	
Sheep trans levy	412 head	@	\$0.20 /head			\$82	
Lamb trans levy	450 head	@	\$1.50 /head			\$675	
SA sheep indust	862 head	@	\$0.55 /head			\$474	
<i>Wool selling charges</i>							
brokerage/testing/insurance		@	\$0.27 /kg			\$2,466	
Industry levy		@	1.5% gross			\$1,884	
Feed and other Costs							
Hand Feeding						\$8,206	
Insurance	\$368,085 value	@	\$2.00 /\$'000			\$736	
Water	2390 DSE's	@	\$1.50 /DSE			\$3,585	
Veh Fuel, R&M	2390 DSE's	@	\$1.20 /DSE			\$2,868	
Other	2390 DSE's	@	\$0.50 /DSE			\$1,195	
TOTAL VARIABLE COSTS						\$76,794	
GROSS MARGIN TOTAL						\$182,453	
GROSS MARGIN/hectare						\$916	
GROSS MARGIN /DSE						\$76	

COMMENTS

(1) DSE ratings are based on the maintenance feed requirements of a 2 year old, 50 Kg liveweight Merino Wether with a body condition score of 2.

(2) The wool price is 90% the price for that micron. This takes into account the lower value of bellies, skirtings, locks etc.

(3) Super/workcover expenses relate only to shearing.

No allowance has been made for pasture expenses such as seed, fertiliser and chemicals. These need to be separately accounted for. Refer to pasture Gross Margins.

PRODUCTION DATA

Stocking rate (DSE/Ha)	12.0
Total DSE's	2390
SHEEP GRAZING AREA	285
Number of ewes mated	1000
Ram percentage	2.5%
Age wethers sold (yrs)	0.5
Years rams kept	4
Flock death rate	3%
Average weaning rate	90%

Culling Rate (% per each group)		
Age group	Ewes	Wethers
0.5	0%	100%
1.5	51%	0%
2.5	0%	0%
3.5	0%	0%
4.5	0%	0%
5.5	0%	0%
6.5	100%	0%

SALES	Number	Price/hd	Total
c.f.a ewes	182	\$115.00	\$20,930
c.f.a merino rams	6	\$75.00	\$450
ewe hoggets	224	\$240.00	\$53,760
wether lambs	450	\$130.00	\$58,500
TOTAL	862	\$154.98	\$133,640

STOCK HEALTH

	Number of times				
	Number	DSE	Drench	Vacc.	Blowfly
ewes	1000	1.8	2	1	1
ewe hoggets	450	1.2	2	1	1
wether weaners	0	0.8	1	1	0
merino lambs	900	0.0	1	2	0
merino rams	25	2.0	4	1	2
TOTAL	2375	2390	3900	3275	1500
Total Value	\$368,085				

FEEDING

Feed	Number of Animals	Feed Cost (\$/T)	kg/ animal	Total cost (\$)
Oats/barley	833	\$260	10 /ewe	\$2,166
Lupins	833	\$500	10 /ewe	\$4,165
Lupins	375	\$500	10 /weaner	\$1,875
Total				\$8,206

SHEARING

	Number	Wool cut kg/hd	Total Greasy kg	Yield (%)	Total Clean kg
ewes	981	5.70	5592	70%	3914
ewe hoggets	443	4.50	1995	70%	1396
wether weaners	0	4.50	0	70%	0
lambs	900	1.50	1350	70%	945
merino rams	25	8.00	197	70%	138
Adults	1449	5.68	7784		

FLOCK STRUCTURE

This table shows the number of merino sheep in each age group at mating

Class of Sheep	Age Group						
	0.5 y.o.	1.5 y.o.	2.5 y.o.	3.5 y.o.	4.5 y.o.	5.5 y.o.	6.5 y.o.
Ewes	450	212	206	200	194	188	0
Wethers	0	0	0	0	0	0	0
Rams		7	6	6	6	0	0

SENSITIVITY ANALYSIS

GROSS MARGIN/DSE	Average Greasy Wool Price (c/Kg)						
	1150	1250	1375	1450	1550	1650	
\$125	\$58	\$61	\$66	\$69	\$73	\$77	
\$130	\$59	\$63	\$68	\$71	\$74	\$78	
\$135	\$61	\$65	\$70	\$72	\$76	\$80	
\$140	\$63	\$67	\$71	\$74	\$78	\$82	
Average	\$64	\$68	\$73	\$76	\$80	\$83	
Sale Price	\$150	\$66	\$70	\$75	\$77	\$81	
All Sheep (\$/hd)	\$155	\$68	\$72	\$76	\$79	\$83	
	\$160	\$70	\$73	\$78	\$81	\$85	
	\$165	\$71	\$75	\$80	\$83	\$86	
	\$170	\$73	\$77	\$81	\$84	\$88	
	\$175	\$75	\$78	\$83	\$86	\$90	

Merino Wethers - High Rainfall

Assumptions:			
Average Wether Fibre Diametre	19	Total DSE's (1)	1200
Number of adult wethers	1000	Stocking rate (DSE/Ha)	12.0

					2019 YOUR ESTIMATE	
INCOME					\$	
Wool (kg greasy)	6790 Kg	[ave price	1375 c/kg] (2)		\$93,376	
Sales	182 animals	[ave price	\$135.00 per hd]		\$24,619	
GROSS INCOME					\$117,995	
EXPENSES						
Shearing						
Shearing	970 sheep	@	\$310.77 /100		\$3,014	
Shed labour	5 days	@	\$234.80 /day		\$1,174	
Woolclasser	3 days	@	\$297.79 /day		\$744	
Superannuation (on ordinary wages only) (3)		@	9.5% wages		\$469	
Work Cover (on wages+super+o'time etc)		@	4.0% total		\$216	
Wool packs	40 packs	@	\$11.20 /pack		\$448	
Shed sundries	970 sheep	@	\$0.20 /head		\$194	
Lice control	970 sheep	@	\$1.68 /head		\$1,626	
Crutching	1000 sheep	@	\$90.12 /100		\$901	
Animal Health						
drench	1000 sheep	@	\$0.60 /head		\$600	
vaccinate	1000 sheep	@	\$0.33 /head		\$328	
blowfly control	1000 sheep	@	\$1.44 /head		\$1,440	
Other Expenses	0 sheep	@	\$0.00 /head		\$0	
Stock Purchases						
Purchases	212 wethers	@	\$120.00 /head		\$25,440	
Sale costs and other						
Freight						
livestock	395	@	\$4.00 /head		\$1,580	
wool	40 bales	@	\$15.00 /bale		\$600	
Stock selling charges						
commission/insurance		@	6.0% gross		\$1,477	
yard fees	182 head	@	\$0.85 /head		\$155	
transaction levy	182 head	@	\$0.20 /head		\$36	
SA sheep indust	182 head	@	\$0.55 /head		\$100	
Wool selling charges						
brokerage/testing/insurance		@	\$0.27 /kg		\$1,833	
Industry levy		@	1.50% gross		\$1,401	
Other Expenses						
Hand Feeding					\$3,900	
Insurance	127500 value	@	\$2.00 /\$'000		\$255	
Water	1200 DSE's	@	\$1.50 /DSE		\$1,800	
Veh Fuel, R&M	1200 DSE's	@	\$1.00 /DSE		\$1,200	
Other Expenses	1200 DSE's	@	\$0.50 /DSE		\$600	
TOTAL VARIABLE COSTS					\$51,533	
GROSS MARGIN					\$66,462	
GROSS MARGIN/hectare					\$665	
GROSS MARGIN/DSE					\$55	

COMMENTS

(1) DSE ratings are based on the maintenance feed requirements of a 2 year old, 50 Kg liveweight Merino Wether with a body condition score of 2.

(2) The wool price is 90% the price for that micron. This takes into account the lower value of bellies, skirtings, locks etc.

(3) Super/workcover expenses relate only to shearing.

No allowance has been made for pasture expenses such as seed, fertiliser and chemicals. These need to be separately accounted for. Refer to pasture Gross Margins.

PRODUCTION DATA

Stocking rate (DSE/Ha)	12.0
Total DSE's	1200
SHEEP GRAZING AREA	100
Number of wethers	1000
Flock death rate	3%
Age wethers bought (yrs)	0.5
Age wethers culled	5.5

Culling Rate (% from each group)			Stock No's
Age group	Ewes	Wethers	
0.5		0%	212
1.5		0%	206
2.5		0%	200
3.5		0%	194
4.5		0%	188
5.5		100%	

SALES	Number	Price/hd	Age	Total
c.f.a wethers	182	\$135.00	5.5	\$24,570
TOTAL	182			\$24,570
PURCHASES	Number	Price/hd	Age yrs	Total
wethers	212	\$120	0.5	\$25,484

STOCK VALUE AND D.S.E REQUIREMENT

	Number	Value \$/head	Ave Live Wt (Kgs)	DSE rating
wethers	1000	\$128	55	1.2
TOTAL	1000			

STOCK HEALTH REQUIREMENTS

	Number of times				DSE rating
	Number	Drench	Vacc.	Blowfly	
wethers	1000	1	1	1	1.2
TOTAL	1000	1000	1000	1000	1200

SHEARING

	Number	Wool cut kg/hd	Total Greasy kg	Yield (%)	Total Clean kg
wethers	970	7.00	6790	70%	4753
TOTAL	970		6790		4753

HAND FEEDING

	kg fed	/animal	\$/tonne	Total
Oats/barley		kg/wether	320	\$0
Hay	15	kg/wether	260	\$3,900
Lupins		kg/wether	500	\$0
Total				\$3,900

SENSITIVITY TABLE

GROSS MARGIN/DSE	Average Greasy Wool Price (c/Kg)						
	1150	1250	1375	1450	1550	1650	
	\$110	\$39	\$45	\$52	\$56	\$62	\$67
	\$115	\$40	\$46	\$53	\$57	\$62	\$68
	\$120	\$41	\$46	\$53	\$57	\$63	\$69
	\$125	\$41	\$47	\$54	\$58	\$64	\$69
Average	\$130	\$42	\$48	\$55	\$59	\$64	\$70
Sale Price	\$135	\$43	\$48	\$55	\$60	\$65	\$71
of wethers	\$140	\$44	\$49	\$56	\$60	\$66	\$71
(\$/hd)	\$145	\$44	\$50	\$57	\$61	\$67	\$72
	\$150	\$45	\$51	\$58	\$62	\$67	\$73
	\$155	\$46	\$51	\$58	\$62	\$68	\$74
	\$160	\$46	\$52	\$59	\$63	\$69	\$74

Lamb Trading - High Rainfall

Assumptions:			
Number of lambs	1000	Total DSE's (1)	600
Average Lamb Fibre Diametre	20	Number of lambs shorn	100%
Lambs bought at	35 kg liveweight	Stocking rate (DSE/Ha)	12.0
Lambs sold at	55 kg liveweight	@	730 c/kg dwt

					2019 YOUR ESTIMATE
INCOME					\$
Wool (kg greasy)	1500 Kg	[ave price	1375 c/kg] (2)		\$20,628
Sales	980 animals	[ave price	\$172.65 per hd]		\$169,192
GROSS INCOME					\$189,820
EXPENSES					
Shearing					
Shearing	1000 sheep	@	\$310.77 /100		\$3,108
Shed labour	2 days	@	\$234.80 /day		\$470
Woolclasser	1 days	@	\$297.79 /day		\$298
Superannuation (on ordinary wages only) (3)		@	9.5% wages		\$368
Work Cover (on wages+super+o'time etc)		@	4.0% total		\$170
Wool packs	9 packs	@	\$11.20 /pack		\$101
Shed sundries	1000 sheep	@	\$0.20 /head		\$200
Lice control	1000 sheep	@	\$1.68 /head		\$1,677
Crutching	0 sheep	@	\$90.12 /100		\$0
Animal Health					
drench	1000 sheep	@	\$0.60 /head		\$600
vaccinate	1000 sheep	@	\$0.33 /head		\$328
blowfly control	500 sheep	@	\$1.44 /head		\$720
Other Expenses	0 sheep	@	\$0.00 /head		\$0
Stock Purchases					
Purchases	1000 lambs	@	\$130.00 /head		\$130,000
Sale costs and other					
Freight					
livestock	1980	@	\$4.00 /head		\$7,920
wool	9 bales	@	\$15.00 /bale		\$135
Stock selling charges					
commission/insurance		@	6.0% gross		\$10,152
yard fees	980 head	@	\$0.85 /head		\$833
transaction levy	980 head	@	\$0.20 /head		\$196
SA sheep indust	980 head	@	\$0.55 /head		\$539
Wool selling charges					
brokerage/testing/insurance		@	\$0.27 /kg		\$405
Industry levy		@	1.50% gross		\$309
Other Expenses					
Supplementary Feeding	0	@	\$0.00 /hd		\$0
Insurance	151322.5 value	@	\$2.00 /\$'000		\$303
Water	1200 DSE's	@	\$1.50 /DSE		\$1,800
Veh Fuel, R&M	1200 DSE's	@	\$1.00 /DSE		\$1,200
Other Expenses	1200 DSE's	@	\$0.50 /DSE		\$600
TOTAL VARIABLE COSTS					\$162,430
GROSS MARGIN					\$27,390
GROSS MARGIN/hectare					\$548
GROSS MARGIN/DSE					\$46

COMMENTS

(1) DSE ratings are based on the maintenance feed requirements of a 2 year old, 50 Kg liveweight Merino Wether with a body condition score of 2.

(2) The wool price is 90% the price for that micron. This takes into account the lower value of bellies, skirtings, locks etc.

(3) Super/workcover expenses relate only to shearing.

No allowance has been made for pasture expenses such as seed, fertiliser and chemicals. These need to be separately accounted for. Refer to pasture Gross Margins.

PRODUCTION DATA

Stocking rate (DSE/Ha)	12.0
Total DSE's	600
SHEEP GRAZING AREA	50
Number of lambs	1000
Flock death rate	2%
Age bought (yrs)	0.5
Age sold	0.8

SALES	Number	Price/hd	Age	Total
Prime lambs	980	\$172.65	0.8	\$169,192
TOTAL	980			\$169,192
PURCHASES	Number	Price/hd	Age yrs	Total
Store lambs	1000	\$130	0.5	\$130,000

STOCK VALUE AND D.S.E REQUIREMENT

	Number	Value \$/head	Ave Live Wt (Kgs)	DSE rating
lambs	1000	\$151	45	0.8
TOTAL	1000			

STOCK HEALTH REQUIREMENTS

	Number of times			DSE rating
	Number	Drench	Vacc.	
Lamb	1000	1	1	0.6
TOTAL	1000	1000	1000	600

SHEARING

	Number	Wool cut kg/hd	Total Greasy kg	Yield (%)	Total Clean kg
lambs	1000	1.50	1500	70%	1050
TOTAL	1000		1500		1050

SENSITIVITY TABLE

GROSS MARGIN/DSE		Average Greasy Wool Price (c/Kg)					
		1150	1250	1375	1450	1550	1650
	\$140	(\$10)	(\$8)	(\$4)	(\$3)	(\$0)	\$2
	\$145	(\$2)	\$0	\$3	\$5	\$8	\$10
	\$150	\$5	\$8	\$11	\$13	\$15	\$18
	\$165	\$28	\$31	\$34	\$36	\$38	\$41
Average	\$170	\$36	\$39	\$42	\$43	\$46	\$48
Sale Price	\$173	\$40	\$43	\$46	\$47	\$50	\$52
of lambs	\$175	\$44	\$46	\$49	\$51	\$54	\$56
(\$/hd)	\$180	\$51	\$54	\$57	\$59	\$61	\$64
	\$185	\$59	\$62	\$65	\$66	\$69	\$71
	\$190	\$67	\$69	\$72	\$74	\$77	\$79
	\$195	\$74	\$77	\$80	\$82	\$84	\$87

Prime Lamb - Cereal Zone

Assumptions			
Ave Breeding Ewe Fibre Diameter	21	Total DSE's (1)	1850
Number of breeding ewes (Merino)	1000	Stocking rate (DSE/Ha)	6.0
Merino ewe - Terminal meat sire			

						2019
INCOME						YOUR
						ESTIMATE
						\$
Wool (kg greasy)	6378 Kg	[ave price	1225 c/kg] (2)		\$86,837	
Sales	1189 animals	[ave price	\$150.71 per hd]		\$179,320	
GROSS INCOME						\$266,157
VARIABLE COSTS						
Shearing						
Shearing	970 sheep	@	\$310.77 /100		\$3,014	
(Federal awards)	24 rams	@	\$621.54 /100		\$149	
Shed labour	5 days	@	\$234.80 /day		\$1,174	
Woolclasser	2.5 days	@	\$297.79 /day		\$744	
Superannuation (on ordinary wages only) (3)		@	9.50% total		\$483	
Work Cover (includes super + o'time etc)		@	4.00% wages		\$203	
Wool packs	38 packs	@	\$11.20 /pack		\$426	
Shed sundries	994 sheep	@	\$0.20 /head		\$199	
Lice control	994 sheep	@	\$0.46 /head		\$456	
Crutch & Wig	0 lambs	@	\$90.12 /100		\$0	
	1019 ewes	@	\$90.12 /100		\$918	
Marking						
Lamb marking	950 lambs	@	\$1.15 /head		\$1,093	
Ear tags	950 lambs	@	\$0.43 /head		\$409	
Animal Health						
drench	2000 sheep	@	\$0.60 /head		\$1,200	
vaccinate	2925 sheep	@	\$0.26 /head		\$772	
blowfly control	1000 sheep	@	\$1.44 /head		\$1,440	
Stock purchases						
Purchases	(refer to opposite page)				\$75,651	
Sale Costs						
<i>Freight</i>						
livestock	239 culls	@	\$4.00 /head		\$956	
	262 ewes	@	\$4.00 /head		\$1,046	
	950 prime lambs	@	\$4.00 /head		\$3,800	
wool	38 bales	@	\$15.00 /bale		\$570	
<i>Stock selling charges</i>						
commission/insurance		@	6.0% gross		\$10,759	
yard fees	1189 head	@	\$0.85 /head		\$1,011	
levy-sheep	239 head	@	\$0.20 /head		\$48	
levy-lambs	950 head	@	\$1.50 /head		\$1,425	
SA sheep industry le	1189 head	@	\$0.55 /head		\$654	
<i>Wool selling charges</i>						
brokerage/testing/insurance		@	\$0.27 kg		\$1,722	
Industry levy		@	1.5% gross		\$1,303	
Feed and Other Costs						
Water	1850 DSE's	@	\$2.50 /DSE		\$4,625	
Veh Fuel, R&M	1850 DSE's	@	\$1.20 /DSE		\$2,220	
Other	1850 DSE's	@	\$0.50 /DSE		\$925	
hay	20.5 tonne	@	\$260.00 /tonne		\$5,330	
grain	24.8 tonnes	@	\$320.00 /tonne		\$7,920	
Insurance	\$235,250 value	@	\$2.00 /\$'000		\$471	
TOTAL VARIABLE COSTS						\$133,116
GROSS MARGIN TOTAL						\$133,041
GROSS MARGIN/hectare						\$431
GROSS MARGIN/DSE						\$72

COMMENTS

(1) DSE ratings are based on the maintenance feed requirements of a 2 year old, 50 Kg liveweight Merino Wether with a body condition score of 2.

(2) The wool price is 90% the price for that micron. This takes into account the lower value of bellies, skirtings, locks etc.

(3) Super/workcover expenses relate only to shearing.

No allowance has been made for pasture expenses such as seed, fertiliser and chemicals. These need to be separately accounted for. Refer to pasture Gross Margins.

PRODUCTION DATA

Stocking rate (DSE/Ha)	6.0
Total DSE's	1850
SHEEP GRAZING AREA	308
Number of ewes mated	1000
Ram percentage	2.5%
Age ewes bought (yrs)	1.5
Age ewes culled	5.5
Years rams kept	3
Flock death rate	3%
Average weaning rate	95%
% Lambs carried over	0%

Culling Rate (% from each group)		
Age group	Ewes	Wethers
0.5	0%	
1.5	0%	
2.5	0%	
3.5	0%	
4.5	0%	
5.5	100%	
6.5	0%	

SALES	Number	Price/hd	Age	Total
c.f.a ewes	232	\$115.00	5.5	\$26,680
c.f.a rams	8	\$80.00	4.5	\$640
lambs	950	\$160.00	20 weeks	\$152,000
TOTAL	1189	150.71		\$179,320
PURCHASES	Number	Price/hd	Age yrs	Total
ewes	262	\$240	1.5	\$62,769
rams	9	\$1,500	1.5	\$12,883

STOCK HEALTH REQUIREMENTS

	Number	Number of times			DSE
		Drench	Vacc.	Blowfly	
ewes	1000	1	1	1	1.8
rams	25	2	1	0	2
lambs	950	1	2	0	
TOTAL	1975	2000	2925	1000	1850

SHEARING

	Number	Wool cut kg/hd	price	Total \$
ewes	970	6.50	\$13.74	86631
crossbred rams	24	3.00	\$2.83	206
TOTAL	994	6378		86837

FEEDING

	Number	Hay	Kgs Fed per week	No weeks of Feeding	Total cost (\$)
		Cost (\$/T)			
ewes	1000	\$260	2.5	8	\$5,200
rams	25	\$260	2.5	8	\$130
	Number	Grain	Kgs Fed per week	No weeks of Feeding	Total cost (\$)
		Cost (\$/T)			
ewes	1000	\$320	3.0	8	\$7,680
rams	25	\$320	3.0	10	\$240

G.M. SENSITIVITY

GROSS MARGIN/DSE		Average Weaning Rate (%)					
		75%	85%	95%	105%	115%	125%
	\$135	\$47	\$54	\$60	\$66	\$73	\$79
	\$140	\$49	\$56	\$62	\$69	\$75	\$82
	\$145	\$51	\$58	\$65	\$72	\$78	\$85
	\$150	\$53	\$60	\$67	\$74	\$81	\$88
Average	\$155	\$55	\$62	\$70	\$77	\$84	\$92
Lamb Sale	\$160	\$57	\$64	\$72	\$80	\$87	\$95
Price (\$/hd)	\$165	\$59	\$66	\$74	\$82	\$90	\$98
	\$170	\$61	\$69	\$77	\$85	\$93	\$101
	\$175	\$62	\$71	\$79	\$88	\$96	\$104
	\$180	\$64	\$73	\$82	\$90	\$99	\$107
	\$185	\$66	\$75	\$84	\$93	\$102	\$111

SR Merino - Cereal Zone

Assumptions			
Ave Breeding Ewe Fibre Diameter	21	Total DSE's (1)	2420
Number of breeding ewes	1000	Stocking rate (DSE/Ha)	6.0

					2019 YOUR ESTIMATE
INCOME					\$
Wool (kg greasy)	11080 Kg	[ave price	1237 c/kg] (2)		\$137,014
Sales	912 animals	[ave price	\$153.74 per hd]		\$140,140
GROSS INCOME					\$277,154
VARIABLE COSTS					
Shearing					
Shearing	2398 sheep	@	\$310.77 /100		\$7,452
(Federal Awards)	25 rams	@	\$621.54 /100		\$155
Shed labour	8 days	@	\$234.80 /day		\$1,878
Woolclasser	4.0 days	@	\$297.79 /day		\$1,191
Superannuation (on ordinary wages only) (3)		@	9.5% wages		\$1,014
Work Cover (includes super + o'time etc)		@	4.0% total		\$468
Wool packs	65 packs	@	\$11.20 /pack		\$728
Shed sundries	2423 sheep	@	\$0.20 /head		\$485
Lice control	2423 sheep	@	\$1.68 /head		\$4,063
Crutch & wig	1448 sheep	@	\$90.12 /100		\$1,305
	25 rams	@	\$180.24 /100		\$45
Marking					
Lamb marking	950 lambs	@	\$1.40 /head		\$1,330
Pain relief	900 lambs	@	\$0.45 /head		\$405
Ear tags	950 lambs	@	\$0.43 /head		\$409
Animal Health					
drench	2475 sheep	@	\$0.60 /head		\$1,485
vaccinate	3400 sheep	@	\$0.26 /head		\$898
blowfly control	1500 sheep	@	\$1.44 /head		\$2,160
Sale and Purchase Costs					
Purchases	7 Merino rams	@	\$2,000.00 /head		\$14,000
Freight	912 sheep	@	\$4.00 /head		\$3,648
	65 bales	@	\$15.00 /bale		\$975
<i>Stock selling charges</i>					
commission/insurance		@	6.0% gross		\$8,408
yard fees	912 head	@	\$0.85 /head		\$775
sheep tran levy	437 head	@	\$0.20 /head		\$87
lamb trans levy	475 head	@	\$1.50 /head		\$713
SA Sheep indust	912 head	@	\$0.55 /head		\$501
<i>wool selling charges</i>					
brokerage/testing/insurance		@	\$0.27 /kg		\$2,992
Industry levy		@	1.5% gross		\$2,055
Feed and other Costs					
Hand Feeding					\$15,255
Insurance	\$376,663 value	@	\$2.00 /\$'000		\$753
Water	2420 DSE's	@	\$2.50 /DSE		\$6,050
Veh Fuel, R&M	2420 DSE's	@	\$1.20 /DSE		\$2,904
Other	2420 DSE's	@	\$0.50 /DSE		\$1,210
TOTAL VARIABLE COSTS					\$85,798
GROSS MARGIN TOTAL					\$191,356
GROSS MARGIN/hectare					\$474
GROSS MARGIN /DSE					\$79

COMMENTS

(1) DSE ratings are based on the maintenance feed requirements of a 2 year old, 50 Kg liveweight Merino Wether with a body condition score of 2.

(2) The wool price is 90% the price for that micron. This takes into account the lower value of bellies, skirtings, locks etc.

(3) Super/workcover expenses relate only to shearing.

No allowance has been made for pasture expenses such as seed, fertiliser and chemicals. These need to be separately accounted for. Refer to pasture Gross Margins

PRODUCTION DATA

Stocking rate (DSE/Ha)	6.0
Total DSE's	2420
SHEEP GRAZING AREA	285
Number of ewes mated	1000
Ram percentage	2.5%
Age wethers sold (yrs)	0.5
Years rams kept	4
Flock death rate	3%
Average weaning rate	95%
Prime lamb weaning %	0%
% mated for prime lms	0%

Culling Rate (% per each group)		
Age group	Ewes	Wethers
0.5	0%	100%
1.5	49%	0%
2.5	5%	0%
3.5	5%	0%
4.5	5%	0%
5.5	5%	0%
6.5	100%	0%

SALES	Number	Price/hd	Total
c.f.a ewes	204	\$115.00	\$23,460
c.f.a merino rams	6	\$75.00	\$450
ewe hoggets	227	\$240.00	\$54,480
wether lambs	475	\$130.00	\$61,750
TOTAL	912	\$153.74	\$140,140

STOCK HEALTH

	Number	DSE	Number of times		
			Drench	Vacc.	Blowfly
ewes	1000	1.8	1	1	1
ewe hoggets	475	1.2	1	1	1
wether weaners	0	0.8	1	1	1
merino lambs	950	0.0	1	2	0
merino rams	25	2.0	2	1	1
TOTAL	2450	2420	2475	3400	1500
Total Value	\$376,663				

FEEDING

Feed	Number of Animals	Fodder Cost (\$/T)	kg/ animal	Total cost (\$)
Oats/barley	1000	\$320	24 /ewe	\$7,680
Hay	1000	\$260	20 /ewe	\$5,200
Lupins	475	\$500	10 /weaner	\$2,375
Total				\$15,255

SHEARING

	Number	Wool cut kg/hd	Total Greasy kg	Yield (%)	Total Clean kg
ewes	980	6.50	6373	68%	4333
ewe hoggets	468	5.50	2573	68%	1750
wether weaners	0	5.00	0	68%	0
lambs	950	2.00	1900	68%	1292
merino rams	25	9.50	234	68%	159
Adults	1473	6.63	9180		
Total	2423		11080		7534

FLOCK STRUCTURE

This table shows the number of merino sheep in each age group at mating

Class of Sheep	Age Group						
	0.5 y.o.	1.5 y.o.	2.5 y.o.	3.5 y.o.	4.5 y.o.	5.5 y.o.	6.5 y.o.
Ewes	475	234	216	199	183	169	0
Wethers	0	0	0	0	0	0	0
Rams		7	6	6	6	0	0

SENSITIVITY ANALYSIS

GROSS MARGIN/DSE	Average Greasy Wool Price (c/Kg)						
	1050	1150	1237	1350	1450	1550	
	\$125	\$60	\$65	\$69	\$74	\$79	\$83
	\$130	\$62	\$67	\$71	\$76	\$80	\$85
	\$135	\$64	\$69	\$72	\$78	\$82	\$87
	\$140	\$66	\$70	\$74	\$79	\$84	\$88
Average	\$145	\$68	\$72	\$76	\$81	\$86	\$90
Sale Price	\$150	\$69	\$74	\$78	\$83	\$87	\$92
All Sheep	\$154	\$71	\$75	\$79	\$84	\$89	\$93
(\$/hd)	\$160	\$73	\$77	\$81	\$86	\$91	\$95
	\$165	\$75	\$79	\$83	\$88	\$93	\$97
	\$170	\$76	\$81	\$85	\$90	\$94	\$99
	\$175	\$78	\$83	\$87	\$92	\$96	\$101

Merino Wethers - Cereal Zone

Assumptions:			
Average Wether Fibre Diameter	21	Total DSE's (1)	1200
Number of adult wethers	1000	Stocking rate (DSE/Ha)	6.0

						2019 YOUR ESTIMATE	
INCOME						\$	
Wool (kg greasy)	7275 Kg	[ave price	1237 c/kg] (2)			\$89,963	
Sales	182 animals	[ave price	\$135.00 per hd]			\$24,619	
GROSS INCOME						\$114,582	
EXPENSES							
Shearing							
Shearing	970 sheep	@	\$310.77 /100			\$3,014	
Shed labour	4 days	@	\$234.80 /day			\$939	
Woolclasser	2 days	@	\$297.79 /day			\$596	
Superannuation (on ordinary wages only) (3)		@	9.5% wages			\$376	
Work Cover (on wages+super+o'time etc)		@	4.0% total			\$173	
Wool packs	43 packs	@	\$11.20 /pack			\$482	
Shed sundries	970 sheep	@	\$0.20 /head			\$194	
Lice control	970 sheep	@	\$1.68 /head			\$1,626	
Crutching	1000 sheep	@	\$90.12 /100			\$901	
Animal Health							
drench	1000 sheep	@	\$0.60 /head			\$600	
vaccinate	1000 sheep	@	\$0.26 /head			\$264	
blowfly control	1000 sheep	@	\$1.44 /head			\$1,440	
Other Expenses	0 sheep	@	\$0.00 /head			\$0	
Stock Purchases							
Purchases	212 wethers	@	\$120.00 /head			\$25,440	
Sale costs and other							
Freight							
livestock	395	@	\$4.00 /head			\$1,580	
wool	43 bales	@	\$15.00 /bale			\$645	
Stock selling charges							
commission/insurance		@	6.0% gross			\$1,477	
yard fees	182 head	@	\$0.85 /head			\$155	
transaction levy	182 head	@	\$0.20 /head			\$36	
SA sheep indust	182 head	@	\$0.55 /head			\$100	
Wool selling charges							
brokerage/testing/insurance		@	\$0.27 /kg			\$1,964	
Industry levy		@	1.5% gross			\$1,349	
Other Expenses							
Hand Feeding						\$3,900	
Insurance	127500 value	@	\$2.00 /\$'000			\$255	
Water	1200 DSE's	@	\$2.50 /DSE			\$3,000	
Veh Fuel, R&M	1200 DSE's	@	\$1.00 /DSE			\$1,200	
Other Expenses	1200 DSE's	@	\$0.50 /DSE			\$600	
TOTAL VARIABLE COSTS						\$52,308	
GROSS MARGIN						\$62,274	
GROSS MARGIN/hectare						\$311	
GROSS MARGIN/DSE						\$52	

COMMENTS

(1) DSE ratings are based on the maintenance feed requirements of a 2 year old, 50 Kg liveweight Merino Wether with a body condition score of 2.

(2) The wool price is 90% the price for that micron. This takes into account the lower value of bellies, skirtings, locks etc.

(3) Super/workcover expenses relate only to shearing.

No allowance has been made for pasture expenses such as seed, fertiliser and chemicals. These need to be separately accounted for. Refer to pasture Gross Margins.

PRODUCTION DATA

Stocking rate (DSE/Ha)	6.0
Total DSE's	1200
SHEEP GRAZING AREA	200
Number of wethers	1000
Flock death rate	3%
Age wethers bought (yrs)	0.5
Age wethers culled	5.5

Culling Rate (% from each group)			Stock No's
Age group	Ewes	Wethers	
0.5		0%	212
1.5		0%	206
2.5		0%	200
3.5		0%	194
4.5		0%	188
5.5		100%	

SALES	Number	Price/hd	Age	Total
c.f.a wethers	182	\$135.00	5.5	\$24,570
TOTAL	182			\$24,570
PURCHASES	Number	Price/hd	Age yrs	Total
wethers	212	\$120	0.5	\$25,484

STOCK VALUE AND D.S.E REQUIREMENT

	Number	Value \$/head	Ave Live Wt (Kgs)	DSE rating
wethers	1000	\$128	55	1.2
TOTAL	1000			

STOCK HEALTH REQUIREMENTS

	Number of times				DSE rating
	Number	Drench	Vacc.	Blowfly	
wethers	1000	1	1	1	1.2
TOTAL	1000	1000	1000	1000	1200

SHEARING

	Number	Wool cut kg/hd	Total Greasy kg	Yield (%)	Total Clean kg
wethers	970	7.50	7275	68%	4947
TOTAL	970		7275		4947

HAND FEEDING

	kg fed	/animal	\$/tonne	Total
Oats/barley	0	kg/wether	320	\$0
Hay	15	kg/wether	260	\$3,900
Lupins		kg/wether	500	\$0
Total				\$3,900

SENSITIVITY TABLE

GROSS MARGIN/DSE	Average Greasy Wool Price (c/Kg)					
	1050	1150	1237	1350	1450	1550
\$110	\$37	\$43	\$48	\$55	\$61	\$67
\$115	\$38	\$44	\$49	\$56	\$62	\$68
\$120	\$39	\$45	\$50	\$57	\$62	\$68
\$125	\$39	\$45	\$50	\$57	\$63	\$69
Average \$130	\$40	\$46	\$51	\$58	\$64	\$70
Sale Price of wethers (\$/hd) \$135	\$41	\$47	\$52	\$59	\$65	\$71
\$140	\$41	\$47	\$53	\$59	\$65	\$71
\$145	\$42	\$48	\$53	\$60	\$66	\$72
\$150	\$43	\$49	\$54	\$61	\$67	\$73
\$155	\$44	\$50	\$55	\$62	\$67	\$73
\$160	\$44	\$50	\$55	\$62	\$68	\$74

Cleanskin Sheep - Cereal Zone

Assumptions		Total DSE's (1)	2750
Number of breeding ewes	1000	Stocking rate (DSE/Ha)	6.0

					2019 YOUR ESTIMATE
INCOME					\$
Sales	1453 animals	[ave price	\$165.27 per hd]		\$240,180
GROSS INCOME					\$240,180
VARIABLE COSTS					\$0
Marking					
Lamb marking	1500 lambs	@	\$1.15 /head		\$1,725
Ear tags	1500 lambs	@	\$0.43 /head		\$645
Animal Health					
drench	3300 sheep	@	\$0.60 /head		\$1,980
vaccinate	4775 sheep	@	\$0.26 /head		\$1,261
blowfly control	0 sheep	@	\$1.44 /head		\$0
Lice control	0 sheep	@	\$1.68 /head		\$0
Sale and Purchase Costs					
Purchases	7 rams	@	\$1,500.00 /head		\$10,500
Freight	204 ewes	@	\$4.00 /head		\$816
	6 rams	@	\$4.00 /head		\$24
	494 hoggets	@	\$4.00 /head		\$1,976
	750 lambs	@	\$4.00 /head		\$3,000
<i>Stock selling charges</i>					
commission/insurance		@	6.0% gross		\$14,411
yard fees	1453 head	@	\$0.85 /head		\$1,235
sheep tran levy	703 head	@	\$0.20 /head		\$141
lamb trans levy	750 head	@	\$1.50 /head		\$1,125
SA Sheep indust	1453 head	@	\$0.55 /head		\$799
					\$0
					\$0
Feed and other Costs					
Hand Feeding					\$16,630
Insurance	\$541,248 value	@	\$2.00 /\$'000		\$1,082
Water	2750 DSE's	@	\$2.50 /DSE		\$6,875
Veh Fuel, R&M	2750 DSE's	@	\$0.80 /DSE		\$2,200
Other	2750 DSE's	@	\$0.50 /DSE		\$1,375
TOTAL VARIABLE COSTS					\$67,800
GROSS MARGIN TOTAL					\$172,380
GROSS MARGIN/hectare					\$376
GROSS MARGIN /DSE					\$63

COMMENTS

(1) DSE ratings are based on the maintenance feed requirements of a 2 year old, 50 Kg liveweight Merino Wether with a Assumes flock is fully wool shedding and therefore no shearing, crutching or lice control costs are included. Assumes only one lambing per year.

No allowance has been made for pasture expenses such as seed, fertiliser and weed control. These need to be separately accounted for.

PRODUCTION DATA

Stocking rate (DSE/Ha)	6.0
Total DSE's	2750
SHEEP GRAZING AREA	458
Number of ewes mated	1000
Ram percentage	2.5%
Age wethers sold (yrs)	0.5
Years rams kept	4
Flock death rate	3%
Average weaning rate	150%

Culling Rate (% per each group)		
Age group	Ewes	Wethers
0.5	0%	100%
1.5	68%	0%
2.5	5%	0%
3.5	5%	0%
4.5	5%	0%
5.5	5%	0%
6.5	100%	0%

SALES	Number	Price/hd	Total
c.f.a ewes	204	\$115.00	\$23,460
c.f.a rams	6	\$80.00	\$480
ewe hoggets	494	\$210.00	\$103,740
wether lambs	750	\$150.00	\$112,500
TOTAL	1453	\$165.27	\$240,180

STOCK HEALTH

	Number of times					
	Number	DSE	Drench	Vacc.	Blowfly	Lice
ewes	1000	1.8	1	1	0	0
ewe hoggets	750	1.2	1	1	0	0
wether weaners	0	0.8	1	1	0	0
lambs	1500	0.0	1	2	0	0
rams	25	2.0	2	1	0	0
TOTAL	3275	2750	3300	4775	0	0
Total Value	\$541,248					

FEEDING

Feed	Number of Animals	Fodder Cost (\$/T)	kg/ Animal	Total cost (\$)
Oats/barley	1000	\$320	24 /ewe	\$7,680
Hay	1000	\$260	20 /ewe	\$5,200
Lupins	750	\$500	10 /weaner	\$3,750
Total				\$16,630

FLOCK STRUCTURE

This table shows the number of sheep in each age group at mating

Class of Sheep	Age Group						
	0.5 y.o.	1.5 y.o.	2.5 y.o.	3.5 y.o.	4.5 y.o.	5.5 y.o.	6.5 y.o.
Ewes	750	234	216	199	183	169	0
Wethers	0	0	0	0	0	0	0
Rams		7	6	6	6	0	0

SENSITIVITY ANALYSIS

GROSS MARGIN/DSE	Average Weaning Percentage						
	120	135	150	165	180	190	
\$130	\$41	\$50	\$58	\$66	\$74	\$79	
\$135	\$42	\$51	\$59	\$67	\$75	\$81	
\$140	\$43	\$52	\$60	\$68	\$77	\$82	
\$145	\$45	\$53	\$61	\$70	\$78	\$84	
\$150	\$46	\$54	\$63	\$71	\$80	\$86	
Sale Price	\$155	\$47	\$55	\$64	\$73	\$81	\$87
Lambs	\$160	\$48	\$56	\$65	\$74	\$83	\$89
(\$/hd)	\$165	\$49	\$58	\$67	\$76	\$84	\$90
	\$170	\$50	\$59	\$68	\$77	\$86	\$92
	\$175	\$51	\$60	\$69	\$78	\$88	\$94
	\$180	\$52	\$61	\$70	\$80	\$89	\$95

Prime Lamb - Pastoral

Assumptions (Lambs sold to specialist finisher)			
Ave Breeding Ewe Fibre Diameter	22	Total DSE's (1)	1858
Number of breeding ewes	1000	Stocking rate (DSE/Ha)	0.14
Merino ewes - Terminal meat sire			

						2019
INCOME						YOUR
						ESTIMATE
						\$
Wool (kg greasy)	5771	Kg	[ave price	1119	c/kg] (2)	\$71,737
Sales	1020	animals	[ave price	\$129.62	per hd]	\$132,200
GROSS INCOME						\$203,937
VARIABLE COSTS						
Shearing						
Shearing	950	sheep	@	\$310.77	/100	\$2,952
(Federal awards)	24	rams	@	\$621.54	/100	\$149
Shed labour	5	days	@	\$234.80	/day	\$1,174
Woolclasser	2.50	days	@	\$297.79	/day	\$744
Superannuation (on ordinary wages only) (3)			@	9.5%	wages	\$477
Work Cover (on wages+super+o'time etc)			@	4.0%	total	\$201
Wool packs	34	packs	@	\$11.20	/pack	\$381
Shed sundries	974	sheep	@	\$0.20	/head	\$195
Lice control	974	sheep	@	\$1.68	/head	\$1,633
Crutch & Wig	800	lambs	@	\$90.12	/100	\$721
	998	adults	@	\$90.12	/100	\$899
Marking						
Lamb marking	800	lambs	@	\$1.15	/head	\$920
Ear tags	800	lambs	@	\$0.43	/head	\$344
Animal Health						
drench	0	sheep	@	\$0.60	/head	\$0
vaccinate	1825	sheep	@	\$0.26	/head	\$482
blowfly control	1000	sheep	@	\$1.44	/head	\$1,440
Stock purchases						
Purchases (refer opposite page)						\$74,800
Sale Costs						
<i>Freight</i>						
livestock	220	culls	@	\$7.00	/head	\$1,540
	270	ewes	@	\$7.00	/head	\$1,887
	800	prime lambs	@	\$7.00	/head	\$5,600
wool	34	bales	@	\$17.00	/bale	\$578
<i>Stock selling charges</i>						
commission/insurance			@	6.0%	gross	\$7,932
yard fees	1020	head	@	\$0.85	/head	\$867
levy-sheep	220	head	@	\$0.20	/head	\$44
levy-lambs	800	head	@	\$1.50	/head	\$1,200
SA sheep indust	1020	head	@	\$0.55	/head	\$561
<i>wool selling charges</i>						
Industry levy			@	1.5%	gross	\$1,076
brokerage/testing/insurance			@	\$0.27	/kg	\$1,558
Feed and Other Costs						
Water	1858	DSE's	@	\$1.50	/DSE	\$2,786
Veh Fuel, R&M	1858	DSE's	@	\$1.70	/DSE	\$3,158
Other	1858	DSE's	@	\$0.50	/DSE	\$929
hay	0.0	tonne	@	\$260.00	/tonne	\$0
grain	0.0	tonnes	@	\$320.00	/tonne	\$0
Insurance	\$221,625	value	@	\$2.00	/\$'000	\$443
TOTAL VARIABLE COSTS						\$117,672
GROSS MARGIN TOTAL						\$86,265
GROSS MARGIN/hectare						\$6.50
GROSS MARGIN/DSE						\$46

COMMENTS

- (1) DSE ratings are based on the maintenance feed requirements of a 2 year old, 50 Kg liveweight Merino Wether with a (1) DSE ratings are based on the maintenance feed requirements of a 2 year old, 50 Kg liveweight Merino Wether with a body condition score of 2.
- (2) The wool price is 90% the price for that micron. This takes into account the lower value of bellies, skirtings, locks etc.
- (3) Super/workcover expenses relate only to shearing.

PRODUCTION DATA

Stocking rate (DSE/Ha)	0.14
Total DSE's	1858
SHEEP GRAZING AREA	13268
Number of ewes mated	1000
Ram percentage	2.5%
Age ewes bought (yrs)	1.5
Age ewes culled	5.5
Years rams kept	4
Flock death rate	5%
Average weaning rate	80%
% Lambs carried over	0%

Culling Rate (% from each group)		
Age group	Ewes	Wethers
0.5	0%	
1.5	0%	
2.5	0%	
3.5	0%	
4.5	100%	
5.5	0%	
6.5	0%	

SALES	Number	Price/hd	Age	Total
c.f.a ewes	220	\$110.00	5.5	\$24,200
c.f.a rams	0	\$70.00	5.5	\$0
lambs	800	\$135.00	20 weeks	\$108,000
TOTAL	1020	\$129.62		\$132,200
PURCHASES	Number	Price/hd	Age yrs	Total
ewes	270	\$240	1.5	\$64,692
rams	7	\$1,500	1.5	\$10,108

STOCK HEALTH REQUIREMENTS

	Number of times				DSE
	Number	Drench	Vacc.	Blowfly	
ewes	1000	0	1	1	1.8
rams	25	0	1	0	2
lambs	800	0	1	0	
TOTAL	1825	0	1825	1000	1850

SHEARING

	Number	Wool cut kg/hd	price	Total
ewes	950	6.00	\$12.55	71535
crossbred rams	24	3.00	\$2.83	202
TOTAL	974	5771		71737

FEEDING

	Number	Hay	Kgs Fed	No weeks	Total
		Cost (\$/T)	per week	of Feeding	cost (\$)
ewes	1000	\$260	3.0	0	\$0
rams	24	\$260	3.0	0	\$0
	Number	Grain	Kgs Fed	No weeks	Total
		Cost (\$/T)	per week	of Feeding	cost (\$)
ewes	1000	\$320	0.0	0	\$0
rams	24	\$320	3.0	0	\$0

G.M. SENSITIVITY

GROSS MARGIN/DSE	Average Weaning Rate (%)						
	50%	60%	70%	80%	90%	100%	
\$105	\$20	\$25	\$30	\$34	\$39	\$44	
\$110	\$22	\$26	\$31	\$36	\$41	\$46	
\$115	\$23	\$28	\$33	\$38	\$44	\$49	
\$120	\$24	\$29	\$35	\$40	\$46	\$51	
Average	\$125	\$25	\$31	\$37	\$42	\$48	
Lamb Sale	\$130	\$27	\$33	\$38	\$44	\$50	
Price (\$/hd)	\$135	\$28	\$34	\$40	\$46	\$53	
\$140	\$29	\$36	\$42	\$48	\$55	\$61	
\$145	\$30	\$37	\$44	\$50	\$57	\$64	
\$150	\$32	\$39	\$46	\$53	\$59	\$66	
\$155	\$33	\$40	\$47	\$55	\$62	\$69	

SR Merino - Pastoral

Assumptions			
Ave Breeding Ewe Fibre Diameter	22	Total DSE's (1)	2660
Number of breeding ewes	1000	Stocking rate (DSE/Ha)	0.14

					2019 YOUR ESTIMATE
INCOME					\$
Wool (kg greasy)	11580 Kg	[ave price	1130 c/kg] (2)		\$130,799
Sales	717 animals	[ave price	\$140.25 per hd]		\$100,500
GROSS INCOME					\$231,299
VARIABLE COSTS					
Shearing					
Shearing	2550 sheep	@	\$310.77 /100		\$7,925
(Federal Awards)	29 rams	@	\$621.54 /100		\$180
Shed labour	10 days	@	\$234.80 /day		\$2,348
Woolclasser	5 days	@	\$297.79 /day		\$1,489
Superannuation (on ordinary wages only) (3)		@	9.5% wages		\$1,134
Work Cover (includes super + o'time etc)		@	4.0% total		\$523
Wool packs	68 packs	@	\$11.20 /pack		\$762
Shed sundries	2579 sheep	@	\$0.20 /head		\$516
Lice control	2579 sheep	@	\$1.68 /head		\$4,324
Crutch & wig	1750 sheep	@	\$90.12 /100		\$1,577
Marking					
Lamb marking	800 lambs	@	\$1.40 /head		\$1,120
Pain relief	900 lambs	@	\$0.45 /head		\$405
Ear tags	800 lambs	@	\$0.43 /head		\$344
Animal Health					
drench	0 sheep	@	\$0.60 /head		\$0
vaccinate	3030 sheep	@	\$0.26 /head		\$800
blowfly control	1000 sheep	@	\$1.44 /head		\$1,440
other	0 sheep	@	\$0.00 /head		\$0
Sale and Purchase Costs					
Purchases	8 Merino rams	@	\$1,500.00 /head		\$12,000
Freight	717 sheep	@	\$7.00 /head		\$5,019
	68 bales	@	\$17.00 /bale		\$1,156
<i>Stock selling charges</i>					
commission/insurance		@	6.0% gross		\$6,030
yard fees	717 head	@	\$0.85 /head		\$609
transaction levy	717 head	@	\$0.20 /head		\$143
SA sheep indust	717 head	@	\$0.35 /head		\$251
<i>Wool selling charges</i>					
brokerage/testing/insurance		@	\$0.27 /kg		\$3,127
Industry levy		@	1.5% gross		\$1,962
Feed and other Costs					
Hand Feeding					\$0
Insurance	\$368,853 value	@	\$2.00 /\$'000		\$738
Water	2660 DSE's	@	\$1.50 /DSE		\$3,990
Veh Fuel, R&M	2660 DSE's	@	\$1.70 /DSE		\$4,522
Other	2660 DSE's	@	\$0.50 /DSE		\$1,330
TOTAL VARIABLE COSTS					\$65,764
GROSS MARGIN TOTAL					\$165,535
GROSS MARGIN/hectare					\$8.71
GROSS MARGIN /DSE					\$62

COMMENTS

- (1) DSE ratings are based on the maintenance feed requirements of a 2 year old, 50 Kg liveweight Merino Wether with a body condition score of 2.
- (2) The wool price is 90% the price for that micron. This takes into account the lower value of bellies, skirtings, locks etc.
- (3) Super/workcover expenses relate only to shearing

PRODUCTION DATA

Stocking rate (DSE/Ha)	0.14
Total DSE's	2660
SHEEP GRAZING AREA	19000
Number of ewes mated	1000
Ram percentage	3.0%
Age wethers sold (yrs)	1
Years rams kept	4
Flock death rate	5%
Average weaning rate	80%
Prime lamb weaning %	0%
% mated for prime lms	0%

Culling Rate (% per each group)		
Age group	Ewes	Wethers
0.5	0%	0%
1.5	42%	100%
2.5	0%	0%
3.5	0%	0%
4.5	0%	0%
5.5	0%	0%
6.5	100%	0%

SALES	Number	Price/hd	Total
c.f.a ewes	171	\$110.00	\$18,810
c.f.a merino rams	7	\$70.00	\$490
ewe hoggets	159	\$200.00	\$31,800
wether hoggets	380	\$130.00	\$49,400
TOTAL	717	\$140.25	\$100,500

STOCK HEALTH

	Number	DSE	Number of times		
			Drench	Vacc.	Jet
ewes	1000	1.8	0	1	1
ewe hoggets	400	1.2	0	1	0
wether weaners	400	0.8	0	0	0
merino lambs	800	0.0	0	2	0
merino rams	30	2.0	0	1	0
TOTAL	2630	2660	0	3030	1000
Total Value	\$368,853				

FEEDING

Feed	Number of Animals	Hay Cost (\$/T)	kg/ animal fed	Total cost (\$)
Oats/barley	1000	\$320	0.0 /ewe	\$0
Hay	1000	\$260	0.0 /ewe	\$0
Lupins	800	\$500	0.0 /weaner	\$0
Total				\$0

SHEARING

	Number	Wool cut kg/hd	Total Greasy kg	Yield (%)	Total Clean kg
ewes	970	6.00	5817	63%	3665
ewe hoggets	390	5.00	1950	63%	1229
wether weaners	390	5.00	1950	63%	1229
lambs	800	2.00	1600	63%	1008
merino rams	29	9.00	263	63%	166
Adults	1779	6.25	9980		
Total	2579		11580		7296

FLOCK STRUCTURE

This table shows the number of merino sheep in each age group at mating

Class of Sheep	Age Group						
	0.5 y.o.	1.5 y.o.	2.5 y.o.	3.5 y.o.	4.5 y.o.	5.5 y.o.	6.5 y.o.
Ewes	400	221	210	199	190	180	0
Wethers	400	0	0	0	0	0	0
Rams		8	8	7	7	0	0

SENSITIVITY ANALYSIS

GROSS MARGIN/HA	Average Greasy Wool Price (c/Kg)						
	850	950	1050	1130	1250	1350	
	\$115	\$44	\$48	\$52	\$56	\$61	\$65
	\$120	\$45	\$49	\$54	\$57	\$62	\$67
	\$125	\$46	\$51	\$55	\$58	\$64	\$68
	\$130	\$48	\$52	\$56	\$60	\$65	\$69
Average	\$135	\$49	\$53	\$58	\$61	\$66	\$70
Sale	\$140	\$50	\$55	\$59	\$62	\$67	\$72
Price (\$/hd)	\$145	\$52	\$56	\$60	\$64	\$69	\$73
	\$150	\$53	\$57	\$61	\$65	\$70	\$74
	\$155	\$54	\$58	\$63	\$66	\$71	\$75
	\$160	\$55	\$60	\$64	\$67	\$72	\$77
	\$165	\$57	\$61	\$65	\$69	\$74	\$78

Merino Wethers - Pastoral

Assumptions:			
Average Wether Fibre Diameter	22	Total DSE's (1)	1200
Number of adult wethers	1000	Stocking rate (DSE/Ha)	0.14

						2019 YOUR ESTIMATE	
INCOME						\$	
Wool (kg greasy)	6720 Kg	[ave price	1130 c/kg] (2)			\$75,902	
Sales	226 animals	[ave price	\$130.00 per hd]			\$29,316	
GROSS INCOME						\$105,219	
EXPENSES							
Shearing							
Shearing	960 sheep	@	\$310.77 /100			\$2,983	
Shed labour	4 days	@	\$234.80 /day			\$939	
Woolclasser	2 days	@	\$297.79 /day			\$596	
Superannuation (on ordinary wages only) (3)		@	9.5% wages			\$429	
Work Cover (on wages+super+o'time etc)		@	4.0% total			\$174	
Wool packs	40 packs	@	\$11.20 /pack			\$448	
Shed sundries	960 sheep	@	\$0.20 /head			\$192	
Lice control	960 sheep	@	\$1.68 /head			\$1,610	
Crutching	1000 sheep	@	\$90.12 /100			\$901	
Animal Health							
drench	0 sheep	@	\$0.60 /head			\$0	
vaccinate	1000 sheep	@	\$0.26 /head			\$264	
blowfly control	1000 sheep	@	\$1.44 /head			\$1,440	
Other Expenses	0 sheep	@	\$0.00 /head			\$0	
Stock Purchases							
Purchases	266 wethers	@	\$130.00 /head			\$34,580	
Sale costs and other							
Freight							
livestock	491	@	\$7.00 /head			\$3,437	
wool	40 bales	@	\$17.00 /bale			\$680	
Stock selling charges							
commission/insurance		@	6.0% gross			\$1,759	
yard fees	226 head	@	\$0.85 /head			\$192	
transaction levy	226 head	@	\$0.20 /head			\$45	
SA sheep indust	226 head	@	\$0.55 /head			\$124	
Wool selling charges							
brokerage/testing/insurance		@	\$0.27 /kg			\$1,814	
Industry levy		@	1.5% gross			\$1,139	
Other Expenses							
Hand Feeding						\$0	
Insurance	130000 value	@	\$2.00 /\$'000			\$260	
Water	1200 DSE's	@	\$1.50 /DSE			\$1,800	
Veh Fuel, R&M	1200 DSE's	@	\$1.50 /DSE			\$1,800	
Other Expenses	1200 DSE's	@	\$0.50 /DSE			\$600	
TOTAL VARIABLE COSTS						\$58,207	
GROSS MARGIN						\$47,012	
GROSS MARGIN/hectare						\$5.48	
GROSS MARGIN/DSE						\$39	

COMMENTS

- (1) DSE ratings are based on the maintenance feed requirements of a 2 year old, 50 Kg liveweight Merino Wether with a body condition score of 2.
- (2) The wool price is 90% the price for that micron. This takes into account the lower value of bellies, skirtings, locks etc.
- (3) Super/workcover expenses relate only to shearing.

PRODUCTION DATA

Stocking rate (DSE/Ha)	0.14
Total DSE's	1200
SHEEP GRAZING AREA	8571
Number of wethers	1000
Flock death rate	4%
Age wethers bought (yrs)	1.5
Age wethers culled	5.5

Culling Rate (% from each group)			Stock No's
Age group	Ewes	Wethers	
0.5		0%	0
1.5		0%	266
2.5		0%	255
3.5		0%	245
4.5		0%	235
5.5		100%	

SALES	Number	Price/hd	Age	Total
c.f.a wethers	226	\$130.00	5.5	\$29,380
TOTAL	226			\$29,380
PURCHASES	Number	Price/hd	Age yrs	Total
wethers	266	\$130	1.5	\$34,516

STOCK VALUE AND D.S.E REQUIREMENT

	Number	Value \$/head	Ave Live Wt (Kgs)	DSE rating
wethers	1000	\$130	55	1.20
TOTAL	1000			

STOCK HEALTH REQUIREMENTS

	Number of times				DSE rating
	Number	Drench	Vacc.	Blowfly	
wethers	1000	0	1	1	1.2
TOTAL	1000	0	1000	1000	1200

SHEARING

	Number	Wool cut kg/hd	Total Greasy kg	Yield (%)	Total Clean kg
wethers	960	7.00	6720	63%	4234
TOTAL	960		6720		4234

HAND FEEDING

	kg fed	/animal	\$/tonne	Total
Oats/barley	0	kg/wether	320	\$0
Hay	0	kg/wether	260	\$0
Lupins	0	kg/wether	500	\$0
Total				\$0

SENSITIVITY TABLE

GROSS MARGIN/DSE	Average Greasy Wool Price (c/Kg)					
	850	950	1050	1130	1250	1350
\$105	\$19	\$25	\$30	\$35	\$41	\$47
\$110	\$20	\$26	\$31	\$36	\$42	\$48
\$115	\$21	\$27	\$32	\$37	\$43	\$49
\$120	\$22	\$28	\$33	\$37	\$44	\$50
Average	\$125	\$23	\$28	\$34	\$38	\$45
Sale	\$130	\$24	\$29	\$35	\$39	\$46
Price (\$/hd)	\$135	\$25	\$30	\$36	\$40	\$47
	\$140	\$26	\$31	\$37	\$41	\$48
	\$145	\$26	\$32	\$37	\$42	\$48
	\$150	\$27	\$33	\$38	\$43	\$49
	\$155	\$28	\$34	\$39	\$44	\$50

Beef Cattle - High Rainfall

Assumptions:		<i>(Breeding young cattle for local trade, grass fattened)</i>	
Breeding Cow	15 DSE	100	Cow breeding herd
Calf Weaning	90%	13	cows replaced per year
Herd Deaths	3%	3%	Bulls bought for \$6,000
Cows c.f.a	10 years old		sold for \$1,500
Uses	13 heifers as replacements		after 3 years
Carry over calf	8 DSE	40%	carryover to heavier weights
Weaned @	8 months	6	months extra carry over
Heifers mated @	15 months	1888	Herd DSE
Stocking rate	10 DSE/ha		Drench cows 2 x
Area required	189 hectares		Drench calves 1 x
Feeds	35 kg/DSE hay equivalent supplement		

					2019 YOUR ESTIMATE
INCOME					\$
Stock sales	54 weaners @	280 kg liveweight@	\$3.00 /kg L/W		\$45,360
	22 yearlings	420 kg liveweight@	\$2.80 /kg L/W		\$25,872
Culls	10 Cows @	550 kg liveweight@	\$1.80 /kg L/W		\$9,491
	1 bull@				\$1,500
GROSS INCOME					\$82,223
VARIABLE COSTS					
Bull Purchases					
No. of bulls	1		\$6,000 total		\$6,000
Veterinary & Medicines					
Drench - cows 2x calves 1x	290	@	\$4.11 /head		\$1,193
Ear Tags NLIS	90	@	\$4.75 /tag		\$428
Lice Treatments	100	@	\$4.11 /dose		\$411
Vaccine (5 in 1)	180	@	\$0.76 /dose		\$137
Supplementary Feed					
Hay	66 tonne	@	\$260.00 /tonne		\$17,160
Grain	0.00 t/head	@	\$320.00 /tonne		\$0
Blocks/ Mineral Mix	100	@	\$5.00 /head		\$500
Sale costs and other					
Insurance	\$119,000	@	\$2.00 /\$1000		\$238
Water	1888 dse's	@	\$1.50		\$2,832
Veh Fuel, R&M	1888 dse's	@	\$1.00		\$1,888
Other	1888 dse's	@	\$0.50		\$944
Transport: Lvstk	87 head	@	\$30.00 /head		\$2,598
Commission		@	6.0%		\$4,933
Levies		@	\$5.00 /head		\$433
TOTAL VARIABLE COSTS					\$39,694
GROSS MARGIN TOTAL					\$42,528
GROSS MARGIN PER COW					\$425
GROSS MARGIN/DSE					\$22.53
GROSS MARGIN/hectare					\$225.25

COMMENTS

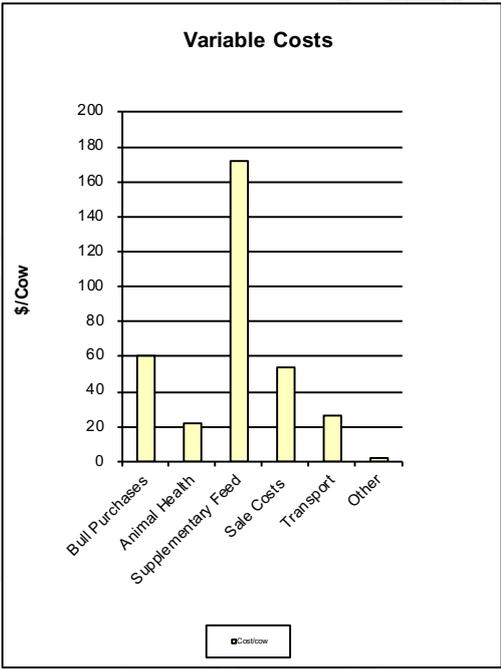
Livestock weight will vary between cattle breed, feed type and age

No allowance has been made for pasture expenses such as seed, fertiliser and weed control. These need to be separately accounted for.

GROSS MARGIN SENSITIVITY PER COW

		\$/kg Liveweight(vealers and yearlings)				
		\$2.50	\$2.70	\$2.90	\$3.10	\$3.30
Weaning %	60%	\$70	\$99	\$127	\$156	\$184
	65%	\$112	\$144	\$176	\$208	\$240
	70%	\$154	\$189	\$225	\$260	\$295
	75%	\$196	\$235	\$273	\$312	\$351
	80%	\$238	\$280	\$322	\$364	\$406
	85%	\$280	\$325	\$371	\$416	\$461
	90%	\$322	\$371	\$419	\$468	\$517
	95%	\$364	\$416	\$468	\$520	\$572
	100%	\$406	\$461	\$517	\$572	\$628

		PER DSE				
		\$/kg Liveweight(vealers and yearlings)				
		\$2.50	\$2.70	\$2.90	\$3.10	\$3.30
Weaning %	60%	\$4	\$5	\$7	\$8	\$10
	65%	\$6	\$8	\$9	\$11	\$13
	70%	\$8	\$10	\$12	\$14	\$16
	75%	\$10	\$12	\$14	\$17	\$19
	80%	\$13	\$15	\$17	\$19	\$22
	85%	\$15	\$17	\$20	\$22	\$24
	90%	\$17	\$20	\$22	\$25	\$27
	95%	\$19	\$22	\$25	\$28	\$30
	100%	\$22	\$24	\$27	\$30	\$33



Beef Cattle - Cereal Zone

Assumptions:		<i>(Breeding young cattle for local trade, grass fattened)</i>	
Breeding Cow	14.5 DSE	100	Cow breeding herd
Calf Weaning	90%	13	cows replaced per year
Herd Deaths	3%	3%	Bulls bought for \$6,000
Cows c.f.a	10 years old		sold for \$1,500
Uses	13 heifers as replacements		after 3 years
Cary over calf	8 DSE		50% carryover to heavier weights
Weaned @	8 months		6 months extra carry over
Heifers mated @	15 months	1960	Herd DSE
Stocking rate	5.00 DSE/ha		Drench cows 2 x
Area required	392 hectares		Drench calves 1 x
Feeds	35 kg/DSE hay equivalent supplement		

					2019	
INCOME					YOUR	
					ESTIMATE	
					\$	
Stock sales	45 vealers @	270 kg liveweight @	\$3.00 /kg L/W	\$36,450		
	31 yearlings	400 kg liveweight @	\$2.80 /kg L/W	\$34,720		
Culls	10 Cows @	550 kg liveweight @	\$1.80 /kg L/W	\$9,491		
	1 bull@			\$1,500		
GROSS INCOME					\$82,161	
VARIABLE COSTS						
Bull Purchases						
No. of bulls	1	@	\$6,000 total	\$6,000		
Veterinary & Medicines						
Drench - cows 2x calves 1x	290	@	\$4.11 /head	\$1,193		
Ear Tags	90	@	\$4.75 /tag	\$428		
Lice Treatments	100	@	\$4.11 /dose	\$411		
Vaccine (5 in 1)	180	@	\$0.76 /dose	\$137		
Supplementary Feed						
Hay	68 tonne	@	\$260.00 /tonne	\$17,680		
Grain	0.00 t/head	@	\$320.00 /tonne	\$0		
Blocks/ Mineral Mix	100	@	\$5.00 /head	\$500		
Sale costs and other						
Insurance	\$119,000	@	\$2.00 /\$1000	\$238		
Water	1960 dse's	@	\$2.50	\$4,900		
Veh Fuel, R&M	1960 dse's	@	\$1.00	\$1,960		
Other	1960 dse's	@	\$0.50	\$980		
Transport: Lvstk	87 head	@	\$30.00 /head	\$2,598		
Commission		@	6.0%	\$4,930		
Levies		@	\$5.00 /head	\$433		
TOTAL VARIABLE COSTS					\$42,387	
GROSS MARGIN TOTAL					\$39,774	
GROSS MARGIN PER COW					\$398	
GROSS MARGIN/DSE					\$20.29	
GROSS MARGIN/hectare					\$101.46	

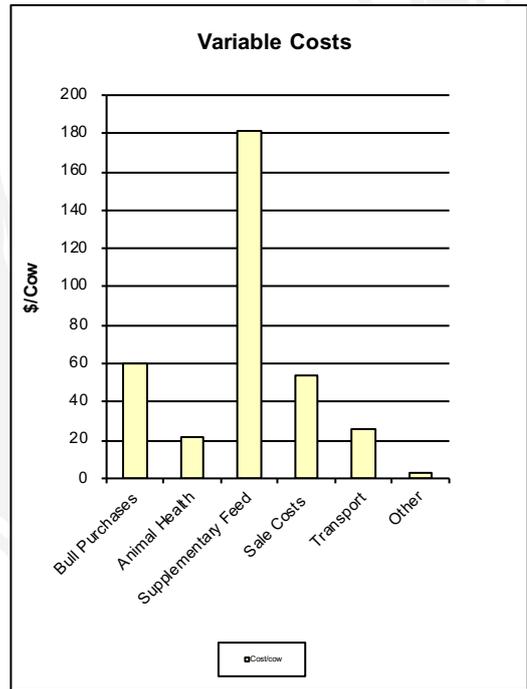
COMMENTS

No allowance has been made for pasture expenses such as seed, fertiliser and weed control. These need to be separately accounted for.

GROSS MARGIN SENSITIVITY PER COW

		\$/kg Liveweight(wealer/yearlings)				
		\$2.50	\$2.70	\$2.90	\$3.10	\$3.30
Weaning %	60%	\$49	\$78	\$107	\$136	\$165
	65%	\$90	\$123	\$155	\$187	\$220
	70%	\$132	\$168	\$204	\$239	\$275
	75%	\$174	\$213	\$252	\$291	\$330
	80%	\$216	\$258	\$301	\$343	\$386
	85%	\$258	\$304	\$349	\$395	\$441
	90%	\$300	\$349	\$398	\$447	\$496
	95%	\$342	\$394	\$447	\$499	\$551
	100%	\$384	\$439	\$495	\$551	\$607

		PER DSE				
		\$/kg Liveweight(wealer/yearlings)				
		\$2.50	\$2.70	\$2.90	\$3.10	\$3.30
Weaning %	60%	\$2	\$4	\$5	\$7	\$8
	65%	\$5	\$6	\$8	\$10	\$11
	70%	\$7	\$9	\$10	\$12	\$14
	75%	\$9	\$11	\$13	\$15	\$17
	80%	\$11	\$13	\$15	\$18	\$20
	85%	\$13	\$15	\$18	\$20	\$22
	90%	\$15	\$18	\$20	\$23	\$25
	95%	\$17	\$20	\$23	\$25	\$28
	100%	\$20	\$22	\$25	\$28	\$31



Beef Cattle - Pastoral

Assumptions:		<i>(Breeding young cattle for store trade)</i>	
Breeding Cow	14.5 DSE	100	Cow breeding herd
Calf Weaning	80%	13	cows replaced per year
Herd Deaths	3%	3%	Bulls bought for \$4,500
Cows c.f.a	10 years old		sold for \$1,200
Uses	13 heifers as replacements		after 3 years
Carry over calf	8 DSE	100%	carryover to heavier weights
Weaned @	8 months	6	months extra carry over
Heifers mated @	20 months	2213	Herd DSE
Stocking rate	0.14 DSE/ha		Drench cows 0 x
Area required	15806 hectares		Drench calves 0 x
Feeds	20 kg/DSE hay equivalent supplement		

					2019
INCOME					YOUR
					ESTIMATE
					\$
Stock sales	67 yearlings	280 kg liveweight	\$2.60 /kg		\$48,776
Culls	10 Cows @	550 kg lwt @	\$1.70 /kg		\$9,350
	1 bull@				\$1,200
GROSS INCOME					\$59,326
VARIABLE COSTS					
Bull Depreciation					
Bull purchase	1 @		\$4,500 total		\$4,500
Veterinary & Medicines					
Drench	0 @		\$4.11 /head		\$0
Ear Tags	80 @		\$4.75 /tag		\$380
Lice Treatments	0 @		\$4.11 /dose		\$0
Vaccine (5 in 1)	0 @		\$0.76 /dose		\$0
Supplementary Feed					
Hay	45 tonne @		\$260.00 /tonne		\$11,700
Grain	0.00 t/head @		\$320.00 /tonne		\$0
Sale costs and other					
Insurance	\$111,500 @		\$2.00 /\$1000		\$223
Water	2213 dse's @		\$2.50		\$5,532
Veh Fuel, R&M	2213 dse's @		\$1.00		\$2,213
Other	2213 dse's @		\$0.50		\$1,106
Transport: Lvstk	78 head @		\$50.00 /head		\$3,900
Commission	@		6.0%		\$3,560
Levies	@		\$5.00 /head		\$390
TOTAL VARIABLE COSTS					\$33,504
GROSS MARGIN TOTAL					\$25,822
GROSS MARGIN PER COW					\$258
GROSS MARGIN/DSE					\$11.67
GROSS MARGIN/hectare					\$1.63

COMMENTS

Feed costs include an allowance for drought fodder.

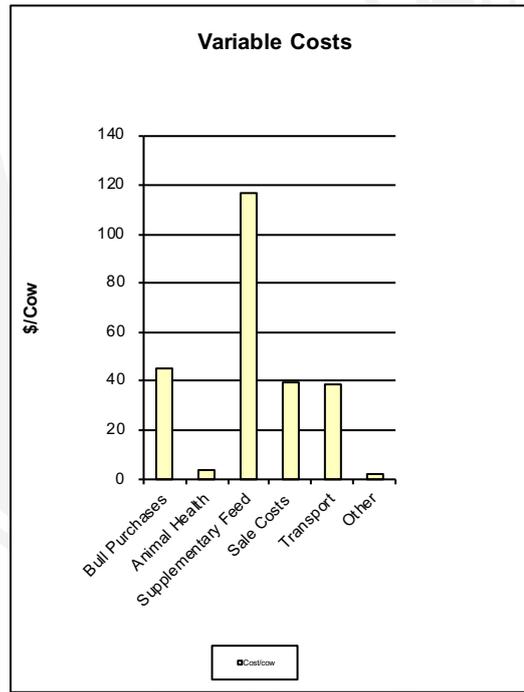
Livestock weight will vary between cattle breed, feed type and age.

GROSS MARGIN SENSITIVITY PER COW

		\$/kg LWT yearlings				
		\$2.00	\$2.30	\$2.60	\$2.90	\$3.10
Weaning %	60%	\$34	\$73	\$113	\$152	\$178
	65%	\$62	\$105	\$149	\$193	\$222
	70%	\$90	\$138	\$185	\$233	\$265
	75%	\$118	\$170	\$222	\$274	\$309
	80%	\$146	\$202	\$258	\$315	\$352
	85%	\$174	\$234	\$295	\$355	\$395
	90%	\$202	\$266	\$331	\$396	\$439
	95%	\$230	\$299	\$367	\$436	\$482
	100%	\$258	\$331	\$404	\$477	\$526

PER DSE

		\$/kg LWT yearlings				
		\$2.00	\$2.30	\$2.60	\$2.90	\$3.10
Weaning %	60%	\$2	\$3	\$5	\$7	\$8
	65%	\$3	\$5	\$7	\$9	\$10
	70%	\$4	\$6	\$8	\$11	\$12
	75%	\$5	\$8	\$10	\$12	\$14
	80%	\$7	\$9	\$12	\$14	\$16
	85%	\$8	\$11	\$13	\$16	\$18
	90%	\$9	\$12	\$15	\$18	\$20
	95%	\$10	\$13	\$17	\$20	\$22
	100%	\$12	\$15	\$18	\$22	\$24



Beef Trading - High Rainfall

Assumptions:		<i>(Finishing young cattle for local trade, grass fattened)</i>	
Herd Deaths	2%		
Vealers	8 DSE		
Yearlings	12 DSE		
		1960	Herd DSE
Stocking rate	10 DSE/ha		
Area required	196 hectares		
		Drench vealers	1 x
Feeds	35 kg/DSE hay equivalent supplement		

					2019 YOUR ESTIMATE
INCOME					\$
Stock sales	0 vealers @	280 kg liveweight@	\$3.00 /kg L/W		\$0
	196 yearlings	420 kg liveweight@	\$2.80 /kg L/W		\$230,496
					\$0
					\$0
GROSS INCOME					\$230,496
VARIABLE COSTS					
Purchases					
Vealers		200	\$785 /head		\$157,000
Transport		200	\$30 /head		\$6,000
Veterinary & Medicines					
Drench - vealers 1x		200 @	\$4.11 /head		\$823
Ear Tags NLIS		0 @	\$4.75 /tag		\$0
Lice Treatments		200 @	\$4.11 /dose		\$823
Vaccine (5 in 1)		200 @	\$0.76 /dose		\$152
Supplementary Feed					
Hay	69 tonne	@	\$260.00 /tonne		\$17,836
Grain	0.00 t/head	@	\$320.00 /tonne		\$0
Blocks/ Mineral Mix		0 @	\$5.00 /head		\$0
Sale costs and other					
Insurance		\$157,000 @	\$2.00 /\$1000		\$314
Water	1960 dse's	@	\$1.50		\$2,940
Veh Fuel, R&M	1960 dse's	@	\$1.00		\$1,960
Other	1960 dse's	@	\$0.50		\$980
Transport: Lvstk	196 head	@	\$30.00 /head		\$5,880
Commission		@	6.0%		\$13,830
Levies		@	\$5.00 /head		\$980
TOTAL VARIABLE COSTS					\$209,517
GROSS MARGIN TOTAL					\$20,979
GROSS MARGIN/DSE					\$10.70
GROSS MARGIN/hectare					\$107.04

COMMENTS

Livestock weight will vary between cattle breed, feed type and age

No allowance has been made for pasture expenses such as seed, fertiliser and weed control. These need to be separately accounted for.

GROSS MARGIN SENSITIVITY

		PER DSE				
		\$/kg Liveweight sales(yearlings)				
		\$2.40	\$2.60	\$2.80	\$3.00	\$3.20
\$/kg Liveweight	\$ 2.40	\$5	\$13	\$21	\$29	\$38
	\$ 2.50	\$2	\$10	\$18	\$27	\$35
	\$ 2.60	-\$1	\$7	\$16	\$24	\$32
	\$ 2.70	-\$4	\$5	\$13	\$21	\$29
	\$ 2.80	-\$6	\$2	\$10	\$18	\$27
	\$ 2.90	-\$9	-\$1	\$7	\$15	\$24
(Vealers)	\$ 3.00	-\$12	-\$4	\$4	\$13	\$21
	\$ 3.10	-\$15	-\$7	\$2	\$10	\$18
	\$ 3.20	-\$18	-\$9	-\$1	\$7	\$15

Beef Feed Lot

Assumptions:		Local supermarket, 210kg HSCW Carcase, AUSMEAT Fat Score 3-4	
Steer Costs:			
Steer purchase	\$744	for	240 kg @ \$3.10 /kg liveweight
Transport In	\$30.00	/head	Average weight gain:- 1.80 kg/hd/day
Est. dressing %	55 %		Carcase weight specification :- 230 kg HSCW
			Final liveweight in lot 418 kg
			Avge liveweight in lot 329 kg
			Est. time on feed 100 days
Feed Costs:			
Total feed consumed	1151 kg		Avge daily Feed intake 11.515 kg
Feed Wastage	5%	58 kg	(3.5% of Liveweight)
Feed cost per tonne	\$325.00	without premix / suppliment	Death Rate 1%

INCOME					Per Head	2019 YOUR ESTIMATE
Finished steers & 2% poor performers sold at 30 days						
0.97 Steer @	230 kg carcass @	\$6.00 /kg HSCW			\$1,338.60	
0.02 Steer @	240 kg liveweight	\$2.80 /kg LVWT			\$13.44	
0.01 Steer @	0	\$0.00			\$0.00	
TOTAL INCOME					\$1,352.04	
VARIABLE COSTS						
<i>Purchases</i>						
Steer purchase	1 @	\$700 /head			700.00	
<i>Feeding Out & Feed</i>						
Feed purchased	1180 kg @	\$325.00 /tonne			383.35	
Premix cost per tonne mixed feed	1180 kg @	\$50.00 /tonne			58.98	
Milling costs + Labour	@	\$26.00 /head			26.00	
Water	@	\$20.00 /head			20.00	
<i>Veterinary & Medicines</i>						
Drench, Dectomax	1 @	\$4.88 /head			4.88	
Ear Tags	1 @	\$0.50 /tag			0.50	
HGP implant , Synovex	0 @	\$2.50 /dose			0.00	
Lice Treatments	0 @	\$0.00 /dose			0.00	
Vaccine	1 @	\$1.00 /dose			1.00	
Veterinary	1 @	\$1.25 /head			1.25	
Vitamin injection	0 @	\$1.50 /head			0.00	
Losses	0.60% @	\$6.50 /head			6.50	
<i>Sale, transport and other costs</i>						
Insurance	\$700 @	\$2.00 /\$1000			1.40	
Transport In	1 @	\$15.00 /head			15.00	
Out	1 @	\$30.00 /head			30.00	
Commission	@	6.0% /head			81.12	
Levies	@	\$5.00 /head			4.95	
Accreditation costs on a 600 hd/year throughput					1.00	
TOTAL VARIABLE COSTS					\$1,336	
GROSS MARGIN PER HEAD					\$16	
Current interest rate 6.0%						
Interest on cattle \$11.51						
Interest on feed \$6.30						
GROSS MARGIN AFTER INTEREST					-\$2	
Break even sale price :- c/kg on purchase price, costs & interest					\$601	
Break even purchase price :- c/kg on sale price & costs					\$285	

COMMENTS

Feed consumed allows for stock sold at 30 days but does not allow for any wastage.

GROSS MARGIN SENSITIVITY		PER HEAD				
		\$/kg HSCW Carcase				
		\$5.00	\$5.50	\$6.00	\$6.50	\$7.00
Feed Cost /tonne	\$ 285.00	-\$149	-\$35	\$79	\$193	\$307
	\$ 295.00	-\$161	-\$47	\$67	\$181	\$295
	\$ 305.00	-\$173	-\$59	\$55	\$169	\$283
	\$ 315.00	-\$184	-\$71	\$43	\$157	\$271
	\$ 325.00	-\$196	-\$82	\$32	\$146	\$260
	\$ 335.00	-\$208	-\$94	\$20	\$134	\$248
	\$ 345.00	-\$220	-\$106	\$8	\$122	\$236
	\$ 355.00	-\$232	-\$118	-\$4	\$110	\$224
	\$ 365.00	-\$243	-\$129	-\$16	\$98	\$212

PREDICTA[®] B



KNOW BEFORE YOU SOW

*CENTRAL NSW, SOUTHERN NSW, VICTORIA, TASMANIA, SOUTH AUSTRALIA, WESTERN AUSTRALIA



Cereal root diseases cost grain growers in excess of \$200 million annually in lost production. Much of this loss can be prevented.

Using PREDICTA[®] B soil tests and advice from your local accredited agronomist, these diseases can be detected and managed before losses occur. PREDICTA[®] B is a DNA-based soil-testing service to assist growers in identifying soil borne diseases that pose a significant risk, before sowing the crop.

Enquire with your local agronomist or visit

http://pir.sa.gov.au/research/services/molecular_diagnostics/predicta_b

Potential high-risk paddocks:

- Bare patches, uneven growth, white heads in previous crop
- Paddocks with unexplained poor yield from the previous year
- High frequency of root lesion nematode-susceptible crops, such as chickpeas
- Intolerant cereal varieties grown on stored moisture
- Newly purchased or leased land
- Cereals on cereals
- Cereal following grassy pastures
- Durum crops (crown rot)

There are PREDICTA[®] B tests for most of the soil-borne diseases of cereals and some pulse crops:

- Crown rot (cereals)
- Rhizoctonia root rot
- Take-all (including oat strain)
- Root lesion nematodes
- Cereal cyst nematode
- Stem nematode
- Blackspot (field peas)
- Yellow leaf spot
- Common root rot
- Pythium clade f
- Charcoal rot
- Ascochyta blight of chickpea
- White grain disorder
- Sclerotinia stem rot

Farm Costs - Livestock 2019

Note: The below costs have been collected from a number of regional sources and should be seen as an **approximate** guide only. Costs will vary depending on situation. Users of this publication should ascertain the relevance of these costs to their particular situation and make adjustments to gross margin budgets if required.

SHEEP			
Lice Control	Avenge	\$20.96 /litre \$1.68 /80ml dose	
	Extinosad	\$50.00 /litre \$1.50 /30ml dose	
		Piranah	\$673.20 /litre \$6.73 per 10ml=100lts wash
	Viper	\$22.00 /litre \$1.76 /80ml dose	
		Triguard	\$50.00 /litre \$0.60 /12ml dose
	Drench	Cyductin	\$23.20 /litre \$0.28 /12ml dose
Dynamax Capsules		\$379.50 /100 capsules \$3.80 /capsule	
Zolvix Plus		\$210.00 /litre \$1.26 /6ml dose	
Startect		\$96.20 /litre \$1.15 /12ml dose	
		Glanvac 3	\$66.00 /250ml \$0.26 /1ml dose
Vaccine		Glanvac 3B12	\$112.00 /250ml \$0.45 /1ml dose
	Glanvac 6	\$82.00 /250ml \$0.33 /1ml dose	
	Glanvac 6B12	\$148.00 /250ml \$0.59 /1ml dose	
	Cobalife Vit B12	\$55.00 /500ml \$0.11 /1ml dose	
	Eryvac	\$177.00 /250ml \$0.71 /1ml dose	
		Gudiar	\$715.00 /250ml \$2.86 /1ml dose
	Multimin Injection	\$335.00 /500ml \$1.68 /5ml dose	
		Vit ADE	\$132.00 /500ml \$0.66 /5ml dose
	Blowfly Control	Clik	\$60.00 /litre \$1.44 /24 ml dose
		Vetrazin Spray On	\$12.22 /litre \$0.81 /66ml dose
			Vetrazin Jetting Fluid
		Blowfly and Lice	\$65.40 /litre \$130.08 per 2L=1000l jetting fluid
Wool packs		nylon	\$11.20 ea
Shearing	Sheep	\$310.77 /100	
	rams	\$621.54 /100	
	shed labour	\$234.80 /day	
	wool classer	\$297.79 day	
	superannuation	9.50% wages	
	Work Cover-Allow	4.00% total	
Crutching	shed sundries	\$0.20 /head	
	sheep	\$90.12 /100	
Lamb marking	rams	\$180.24 /100	
	mulesing / materials	\$1.40 /head	
	marking only	\$1.15 /head	
	ear tags	\$0.43 /head	
Stock selling	Tri-Solfen	\$145.60 /litre \$1.46 /10 ml dose	
	commission/insurance	6.0%	
	yard fees	\$0.85 /head	
	sheep transaction levy	\$0.20 /head	
	lamb transaction levy	\$1.50 /head	
	SA sheep industry levy	\$0.35 /head	
wool brokerage / testing / insurance	\$0.27 /kg		
wool levy	1.5%		

Farm Costs - Livestock 2019

Note: The below costs have been collected from a number of regional sources and should be seen as an **approximate** guide only. Costs will vary depending on situation. Users of this publication should ascertain the relevance of these costs to their particular situation and make adjustments to gross margin budgets if required.

BEEF		
Drench	Eprinex Pour-on	\$82.25 /litre
		\$4.11 /25ml dose
	Eclipse Combination Pour-on	\$200.00 /litre
		\$5.50 /27.5ml dose
	Cydetin Pour-on	\$60.00 /litre
		\$3.30 /55ml dose
	Ivermec	\$101.50 /litre
		\$5.58 /2ml dose
	Dectomax Pour-on	\$88.57 /litre
		\$4.87 /55ml dose
Fly and Lice	Arrest	\$73.00 /litre
		\$2.19 /30ml dose
Vaccine	Ultravac 5 in 1	\$62.00 /250 ml
		\$0.50 /2ml dose
	Ultravac 5 in 1 with B12	\$95.00 /500 ml
		\$0.76 /4ml dose
	Ultravac 7 in 1	\$225.00 /250 ml
		\$2.25 /2.5ml dose
	Multimin Inj	\$380.00 /500ml
		\$3.80 /5 ml dose
	Vit ADE	\$132.00 /500ml
		\$1.32 /5ml dose
	Cobalife Vit B12	\$55.00 /500 ml
		\$0.55 /5 ml dose
NLIS Breeder Tags (incl levy)		\$4.75 each
Electronic Sheep Tags		\$2.00 each
Indicative freight costs for GM purposes	Freight cattle in	\$30.00
	Freight cattle out	\$30.00
	Freight cattle out (Pastoral)	\$50.00
	Cattle levy	\$5.00

FEED & OTHER COSTS		
	Water	\$2.50 /DSE
	Veh Fuel, R&M	\$1.00 /DSE
	Other	\$0.50 /DSE
	Hay	\$260.00 /tonne incl freight
	Feed Cereal grain	\$320.00 /tonne incl freight
	Lupins	\$500.00 /tonne incl freight
	Pre Lambing Lick Block	\$28.00 /block
	Dry Feed Lick Block	\$23.00 /block

STOCK RETURNS	2016 Average (Clean)	2017 Average (Clean)	2018 Average (Clean)	Budget Base Clean Price	Budget Base Greasy Price
WOOL- High Rainfall 28 mic 70%Yield	774	756	895	875	611
- High Rainfall 19 mic 70% Yld	1484	1878	2223	2183	1528
- Med Rainfall 21 mic 68% Yield	1397	1533	2085	2020	1374
- Low Rainfall 22 mic 63% Yield	1380	1461	2065	1994	1255
- Crossbred Ram 32 mic			450	443	283

Farm Costs - Cropping 2019

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CHEMICAL COSTS - HERBICIDES	
2,4-D Amine (625g/l)	\$6.00 /litre
2,4-D LV Ester (680g/l)	\$6.50 /litre
Achieve® WG	\$52.00 /kg
Affinity®	\$122.50 /litre
Aptitude®	\$50.00 /kg
Atlantis® (mesosulfuron 30g/L)	\$88.00 /litre
Atrazine (900 g/kg)	\$7.80 /litre
Axial®	\$150.00 /litre
Balance ®	\$0.15 /gram
Boxer Gold®	\$10.92 /litre
Broadstrike®	\$0.36 /gram
Diflufenican (Brodal)	\$35.88 /litre
Bromoxynil 200	\$12.25 /litre
Bromoxynil /MCPA	\$11.40 /litre
Cadence® (700gm/Kg Dicamba)	\$27.88 /kg
Chlorsulfuron 750g/kg (Glean)	\$0.06 /gram
Clopyralid 600g/L (Lontrel® Advanced)	\$38.28 /litre
Rexade® (New formulation of Crusader®)	\$330.00 /litre
Diuron 900 gm a.i. granules	\$11.10 /kg
Factor® (butroxydim 250g/kg)	\$0.12 /gram
Flight®	\$19.50 /litre
Triclopyr 755g/L	\$13.80 /litre
Triclopyr 600g/L	\$6.30 /litre
Glyphosate 540g/L	\$6.30 /litre
Glyphosate 450g/L	\$4.50 /litre
Carfentrazone 400g/L (Hammer)	\$166.00 /litre
Intervix®	\$30.00 /litre
Metribuzin 750 gm/kg	\$31.20 /kg
M.C.P.A. LVE	\$8.13 /litre
MCPA Amine (750g/L)	\$9.20 /litre
Metsulfuron methyl	\$0.06 /gram
Oxyfluorfen 240g/L	\$14.90 /litre
Paradigm®	\$0.50 /gram
Paraquat 250 g/L	\$5.88 /litre
Precept®	\$16.00 /litre
Propyzamide (500 g/L)	\$19.94 /litre
Quizalofop 200g/L	\$15.66 /litre
Raptor	\$0.50 /litre
Reglone®	\$13.95 /litre
Sakura®	\$340.00 /kg
Sentry®	\$0.22 /gram
Clethodim	\$13.25 /litre
Sharpen®	\$0.51 /gram
Simazine Granules 900g/kg	\$7.60 /kg
S-metolachlor 960g/L (Dual®Gold)	\$16.00 /litre
Imazethapyr 700g/kg	\$98.40 /kg
Sprayseed®	\$9.97 /litre
Starane® Advanced (fluroxypyr 333g/L)	\$22.95 /litre
Terbyne® 875	\$27.90 /kg
Tigrex	\$14.00 /lt
Topik® EC	\$38.80 /litre
Tri-allate 500g/L	\$8.86 /litre
Triasulfuron 750g/kg (Logran)	\$0.08 /gm
Valor®	\$160.00 /kg
Velocity®	\$31.50 /litre
Trifluralin 480g/L	\$5.24 /litre
Haloxypop 520g/L (Verdict)	\$45.60 /litre
Talinor	\$25.70 /litre
Prosulfocarb	\$9.45 /litre
Pixxaro	\$42.50 /litre

Farm Costs - Cropping 2019

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CHEMICAL COSTS - ADJUVANTS		
Uptake (Oil)	\$6.20	/litre
BS-1000 (WETTER)	\$5.50	/litre
Supercharge®	\$7.20	/litre
Hasten®	\$4.70	/litre
Banjo®	\$5.00	/litre
Adigor®	\$8.40	/litre
Hot-up®	\$5.00	/litre
LI-700	\$4.90	/litre
Surfactant cost (with Achieve) Per Ha	\$4.05	Assume 75l/ha @ 0.75% surf.
Oil Cost	\$2.33	Assume 75l/ha @0.5% oil
Wetter Cost per Ha	\$0.41	Assume 75l/ha @ 0.1% surf.

CHEMICAL COSTS - INSECTICIDES		
Dimethoate 400g/L	\$9.40	/litre
Alpha-cypermethrin 16g/L	\$6.43	/litre
Lambda-cyhalothrin (Karate Zeon®)	\$85.00	/litre
Trojan®	\$110.00	/litre
Sumi-Alpha® Flex	\$9.70	/litre
Pyrex® Super	\$9.50	/litre
Imidan®	\$14.38	/litre
Pirimicarb 500g/kg	\$31.20	/kg
Chlorpyrifos 500g/L	\$8.20	/litre
Bifenthrin 250g/L (Talstar®)	\$29.60	/litre
Imidacloprid 600g/L	\$34.95	/litre
Transform	\$155.00	/litre
Affirm	\$77.00	/litre
Cruiser 350	\$48.00	/litre
Cobalt	\$8.45	/litre
Omethoate	\$25.88	/litre

CHEMICAL COSTS - FUNGICIDES		
Apron® XL 350 ES	\$395.00	/litre
Mancozeb 750g/kg	\$9.34	/kg
Veto® 25C Flowable	\$13.86	/litre
Vibrance®	\$36.40	/litre
EverGol® Energy	\$54.50	/litre
Rancona Dimension®	\$37.68	/litre
Baytan® T Flowable	\$26.40	/kg
Pontiac®	\$26.25	/kg
P-Pickel T	\$34.00	/litre
Carbendazim 500g/kg	\$11.80	/kg
Tebuconazole 430	\$14.80	/litre
Propiconazole 250g/L	\$11.90	/litre
Chlorothalonil 720g/L	\$12.40	/litre
Prosaro®	\$74.50	/litre
Amistar Xtra®	\$41.20	/litre
Tazer® Xpert	\$22.30	/litre
Systiva®	\$209.00	/litre
Procymidone 500g/L	\$24.80	/litre
Cogito®	\$27.00	/litre
Veritas®	\$24.90	/litre
Epoxiconazole 125g/L	\$18.00	/litre
Flutriafol (500g/l)	\$26.00	/litre
Aviator X-Pro®	\$54.50	/litre
Uniform®	\$63.30	/litre

Farm Costs - Cropping 2019

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CHEMICAL COSTS - TRACE ELEMENTS	
Zincsulphate	\$1.75 /litre
Coppersulphate	\$3.60 /litre
Mangasulphate	\$1.45 /litre

FUEL COSTS	
Total price - Diesel (GST Exc)	\$1.30 /litre
Rebate	\$0.39 /litre
Net Price Diesel - \$/litre	\$0.91 /l bulk includes rebate

FERTILISER COSTS	
MAP 10:22	\$685 /tonne
DAP 18:20	\$685 /tonne
Urea	\$540 /tonne
Superphosphate	\$360 /tonne
Granulock Z 11:22:0:4 plus 1% Zinc	\$755 /tonne
DAP + Urea 24:16	\$672 /tonne
DAP + Urea 28:13	\$650 /tonne
DAP + Urea 32:10	\$629 /tonne
Sulphate of Ammonia	\$365 /tonne

GRAIN GRADING & PICKLING		Cost /Tonne
Grading	cereals	\$27.00
	other crops	\$28.00
Pickling	cereals	\$5.00
	other crops	\$5.00
Grain Pickling - <i>Wheat</i> - <i>Barley</i>	Veto® 25C Flowable	\$13.86
	Systiva®	\$313.50
Note- Assumes minimum standard of application for smuts and bunts. More expensive options available which may give some control of foliar diseases. Seek advice		
Aphid Control - Cereals - Lupins	Imidacloprid (240ml/100Kg)	\$8.39 /100 kg treated seed
	Imidacloprid (300ml/100Kg)	\$11.53 /100 kg treated seed
Inoculant	Legumes	\$50.00 /tonne treated seed
Seed Treatment	Apron® XL 350 ES	\$296.25 /tonne treated seed
	P-Pickle T	\$68.00 /tonne treated seed

FREIGHT COSTS (as included in Gross Margins)	Cost /Tonne
CANOLA	\$30.00
FERTILIZER	\$25.00
LENTILS	\$35.00
OTHER LEGUME GRAINS	\$30.00
CEREAL GRAINS	\$25.00
TRITICALE	\$25.00
HAY-OATEN	\$30.00

Farm Costs - Cropping 2019

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CONTRACT RATES (indicative only- will be highly variable depending on situation)		Range
Ground Spraying	\$10.00 /hectare	
Aerial spraying	\$14.00 /hectare	
Contract harvesting cereals, low rainfall	\$55.00 /hectare	\$50-60/Ha
Contract harvesting cereals, medium rainfall	\$70.00 /hectare	\$65-75/Ha
Contract harvesting cereals, high rainfall	\$85.00 /hectare	\$80-90/Ha
Contract harvesting pulse/canola, low rainfall	\$70.00 /hectare	\$60-80/Ha
Contract harvesting pulse/canola, medium rain	\$85.00 /hectare	\$75-95/Ha
Contract harvesting pulse/canola, high rainfall	\$100.00 /hectare	\$90-110/Ha
Windrowing	\$38.00 /hectare	
Contract spreading	\$8.50 /hectare	excludes cartage
Contract sowing	\$50.00 /hectare	
Haymaking		
Contract mowing/ conditioning	\$50.00 /hectare	
Hire of rake(supply own tractor and labour)	\$8.00 /hectare	
Contract baling (725kg square bales)	\$25.00 /bale	
Super conditioner (oaten hay)	\$25-40.00 /hectare	
Hay Accumulation	\$3.00 /bale	

Farm Costs 2019

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INSURANCE COSTS	
Livestock	
Sheep and cattle	\$2.00 /\$1,000 insured
Crops	
Cereals	\$8.50 /\$1,000 insured
Chickpeas, lupins, safflower	\$10.00 /\$1,000 insured
Faba beans, vetch, lentils, canola	\$12.00 /\$1,000 insured
Field Peas	\$16.00 /\$1,000 insured

Machinery Cost Information 2019

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Repairs & Maintenance - as a % of new value (shown below).
Lubrication costs - 5% of fuel cost.

Machine	New Value \$	Expected Life - hours	Work Efficiency %	Work Rate ha/hr	Fuel Use litre/hr	Rep & Main % New Value	Hours use per year	Costs per Hectare			
								Rep & Main	Fuel	Lubric'n	Total
Tractor (220 kW)	275000	8,000				2	500	\$11.00	Cost per hour		\$11.00
Tractor (90 kW)	150000	8,000				2	500	\$6.00	Cost per hour		\$6.00
S.P. header (9 m)	650000	2,500	85%	7.0	45	2.5	250	\$9.29	\$5.85	\$0.29	\$15.43
S.P. header (9 m)(peas, lentils, vetch)	650000	2,500	70%	5.0	45	4	250	\$20.80	\$8.19	\$0.41	\$29.40
SP header(9m) beans, chicks, lupins)	650000	2,500	70%	6.0	45	3	250	\$13.00	\$6.83	\$0.34	\$20.17
Airseeder (12m)	250000	2,000	80%	7.5	40	2	250	\$2.67	\$4.85	\$0.24	\$7.76
Boomspray (30 m)	130000	1,500	75%	40.0	18	2	150	\$0.43	\$0.41	\$0.02	\$0.86
Roller (6 m)	15000	5,000	90%	10.0	18	1	20	\$0.75	\$1.64	\$0.08	\$2.47
Mower-conditioner (5m)	60000	2,000	80%	4.0	12	2	100	\$3.00	\$2.73	\$0.27	\$6.00



SA GRAIN GROWERS FUNDING RESEARCH SOLUTIONS

SAGIT has a board of four grower trustees (Group A) and a trustee appointed by the Minister for Agriculture (Group B). Our management team oversees the trust's operations.

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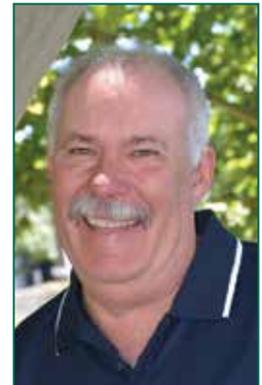
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The SAGIT website features individual summaries of each research project and its outcomes, videos and photos. You can also access the Farm Gross Margin Guide and the Brome Grass Bulletin online, plus application forms and funding guidelines.

And, remember to follow SAGIT on social media!





SA GRAIN GROWERS FUNDING RESEARCH SOLUTIONS

SAGIT has invested almost \$2 million in new projects in 2018 supporting research crucial to the advancement of the industry with funds from the 30c/tonne contribution on all grain delivered by SA growers.

New projects funded this year include 25 research projects and 6 grower group projects:

- 10th Australasian Soilborne Disease Symposium, Australasian Plant Pathology Association
- 2018 Ag Excellence Awards & Forum, Ag Excellence Alliance
- Adjuvants information workshops, EP Agricultural Research Foundation
- Benchmarking yield potential of barley in higher rainfall zones, SARDI
- Comparative effects of agricultural pesticides on SA soil microbial functions, University of South Australia
- Conversations with farmers agricultural practice change with the PA early adopters, Society of Precision Agriculture Australia
- Development of wheat population using speed breeding for salinity tolerance, University of Adelaide
- Drivers of flowering time in durum, SARDI
- Economics of high P rates on pulses, Agronomy Solutions
- Establishing current levels of salt tolerance in Australian bread wheats, SARDI
- Further development of crown rot resistance in durums, SARDI
- Grower crop root health workshops, SARDI
- Herbicide residue effects on soil microbial communities in alkaline soils, University of Adelaide
- Identifying nutrient requirements of lentils & chickpeas grown in Mallee sands, Mallee Sustainable Farming
- Improved capture of native soil N & urea fertiliser in wheat, CSIRO Agriculture & Food
- Improved crop nutrition for disease management and reduced fungicide dependency, SARDI
- Improved soil water decisions across the south-east cropping region, MacKillop Farm Management Group
- Investigating frost susceptibility in Clearfield varieties treated with imidazoline herbicide, Mallee Sustainable Farming
- Investigating the accuracy of plant traits measured using drones, University of Adelaide
- Making science useful for agriculture, SARDI
- More than Gumboots and Tractors, AgCommunicators
- Annual Trial Results Book 2018, MacKillop Farm Management Group
- On farm optimisation of oat grain production & marketing, MacKillop Farm Management Group
- Phenotypic evaluation of a wheat RIL population for salinity tolerance, University of Adelaide
- Plot sprayer for research on Kangaroo Island, Agriculture Kangaroo Island
- Profitable pulses for the Murray Plains, Moodie Agronomy
- Publication of the 2019 Farm Gross Margin Guide for SA, Rural Solutions
- Rapid development of innovative lentils for low rainfall regions, Global Grain Genetics
- SA high-rainfall zone canola VRN prescription project, Elders Rural Services
- Smarter Farmers Smarter Farms, Upskilling the women of the UN to be future ready sustainable more productive farmers, Upper North Farming Systems
- Survey potential emerging pulse root diseases, SARDI

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