

# Pastures can still be a driver for farm profit

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## KEY MESSAGES

Pastures can still be a driver for profit for farm profit but you need to be performing above the average. The last time I conducted this analysis which was in 2007 the average "Mixed" farm matched the average "All Crop" System in terms of return on capital. In the last five years the average "Mixed" Farm System has fallen well behind the "All Crop" system. This result is despite the increasing input costs from herbicide resistance putting more pressure on the high crop percentage systems.

The livestock enterprise needs to be well run to make sure that the pasture production is converted into a profit. A well-managed system with pastures can make the same return as a well-managed crop dominant system. The reverse is also true and the data shows a poorly run "Mixed" farm can lose just as much money as a poorly run "All Crop" farm. There is little evidence to support the view that while "Mixed" farms may not make as much money as "All Crop" farms in the good years, that they have smaller losses in the low rainfall years and in years of low grain prices. The data indicates stock dominant businesses may enjoy some downside protection, but we are only working with a small number of businesses in that group so we need to be careful of our interpretation of the data.

If your farm has soil types which are suited to cropping the evidence suggests that moving to a higher crop percentage will result in better returns, providing the climatic and economic conditions remain the same as the last 10 years. If you have soil types that are not suited to 100% crop, then you need to make sure your pasture and livestock management is "best practice" to achieve a reasonable profit margin.

The tough starts to the seasons over the last ten years have pushed up the average feed costs in the stock enterprises and this has lowered the average profit per DSE. The average feed cost in 2000 -2004 was \$2.61/DSE, and over the last five years has been \$6.64/DSE.

### *Rotation Profit*

Rotation profit should be assessed on a paddock by paddock basis. The following analysis uses the average production figures from the FARMANCO Profit Series.

When looking at the profitability of different enterprises over the long term it is critical that you use the Operating Profit rather than Gross Margins. Gross Margins are useful for making decisions over a short time frame when the machinery and infrastructure are already in place. Over the long term however it is possible for an enterprise with a high gross margin to have a lower operating profit because of the extensive machinery or infrastructure required for that enterprise. The fixed operating costs that are taken off after the Gross Margin level are i) business overheads, ii) an allowance for replacement of machinery and infrastructure, and iii) a management allowance. This provides you with what we have called operating profit and is also commonly referred to as EBIT (earnings before interest and tax).

The table below shows the profitability of the components and rotations of three common rotations in the Central Wheatbelt. The analysis also shows how we arrive at an Operating Profit and a Return on Productive Assets which is a key profitability measure in the Farming Systems Analysis.

**Table 1. Crop Rotation vs Pasture Rotation using average production data.**

| Farming System  | Wheat       | Canola      | Lupins       | Sheep       | WWCn        | WCnWL       | WP          |
|---|-------------|-------------|--------------|-------------|-------------|-------------|-------------|
| Land Value (inc Infrastructure)   | \$1,500     | \$1,500     | \$1,500      | \$1,500     | \$1,500     | \$1,500     | \$1,500     |
| Machinery   | \$400       | \$440       | \$400        | \$110       | \$400       | \$410       | \$255       |
| Sheep (\$40/DSE = \$60/ewe)   |             |             |              | \$184       |             |             | \$92        |
| Productive Assets   | \$1,900     | \$1,940     | \$1,900      | \$1,794     | \$1,900     | \$1,910     | \$1,847     |
| Yield t/ha [Stocking Rate DSE/ha]   | 1.94        | 1.03        | 1.13         | [4.60]      |             |             |             |
| Price \$/t Income/DSE   | 285         | 540         | 280          | 60          |             |             |             |
| <b>Income \$/ha</b>   | <b>553</b>  | <b>556</b>  | <b>316</b>   | <b>277</b>  | <b>554</b>  | <b>494</b>  | <b>415</b>  |
| Variable Costs \$/ha  | 300         | 310         | 250          | 142         | 305         | 290         | 220         |
| Variable Cost %   | 54%         | 56%         | 79%          | 51%         | 55%         | 59%         | 53%         |
| Gross Margin \$/ha  | 253         | 246         | 66           | 135         | 249         | 204         | 194         |
| Overheads \$/ha   | 30          | 30          | 30           | 30          | 30          | 30          | 30          |
| Machinery \$/ha   | 52          | 56          | 52           | 10          | 53          | 53          | 31          |
| Infrastructure \$/ha  | 15          | 15          | 15           | 15          | 15          | 15          | 15          |
| Management \$/ha  | 35          | 35          | 35           | 35          | 35          | 35          | 35          |
| Total Operating Fixed Costs   | 132         | 136         | 132          | 90          | 133         | 133         | 111         |
| <b>Total Operating Costs</b>  | <b>432</b>  | <b>446</b>  | <b>382</b>   | <b>232</b>  | <b>438</b>  | <b>423</b>  | <b>331</b>  |
| Operating Profit (EBIT)   | 121         | 110         | -66          | 45          | 116         | 71          | 83          |
| <b>Return on Productive Assets<br/>(no Capital Growth)</b>                      | <b>6.4%</b> | <b>5.7%</b> | <b>-3.5%</b> | <b>2.5%</b> | <b>6.1%</b> | <b>3.7%</b> | <b>4.5%</b> |
| Funding Cost @ 8%<br>(Op. Costs for 6 mths, Machinery & Livestock fully funded) | 49          | 53          | 47           | 33          | 50          | 50          | 41          |
| Net Profit – before Tax (EBT)   | 72          | 57          | -113         | 12          | 66          | 21          | 42          |
| <b>Return on Land Value<br/>(no Capital Growth)</b>                             | <b>4.8%</b> | <b>3.8%</b> | <b>-7.5%</b> | <b>0.8%</b> | <b>4.4%</b> | <b>1.4%</b> | <b>2.8%</b> |

The first thing to note about the above analysis is the low levels of profit on a dollars per hectare basis, and how this translates into very poor returns on current land values.

The crop dominant system was more reliant on the good performance of grain legumes in the past, but with many businesses in the medium and high rainfall zones using canola instead of grain legumes to provide a weed and disease break, you can see why there has been a shift to a higher crop percentage with the inclusion of canola.

For those businesses that have ryegrass which is resistant to clethodim or radish which is resistant to atrazine, they have moved to the Roundup Ready Canola which does increase the cost of growing canola but still makes it more profitable than the pasture phase.

The rotation profit analysis shows for the WWL rotation to equal the WP rotation, the lupin operating profit needs to increase by \$84/ha, which would be an extra 0.3 t/ha. Therefore, the breakeven yield for a lupin crop to match a 4.6 DSE/ha pasture is 1.4t/ha which is 26% above the average yield being produced over the last five years.

By intensively measuring the profitability of enterprises, (right down to a paddock basis for some clients), we are able to show many clients that the legume component of their intensive crop systems is making a significant loss, which couldn't be made up through the remainder of the rotation. What we discovered through this analysis was that although livestock enterprises based on clover pastures were producing a small operating profit, a small profit for pasture was better than the loss being sustained through the grain legume phase. Our analysis also showed there was a huge range of profitability of livestock enterprises and that often good livestock managers were not the best crop managers or didn't have suitable soil types for grain legumes. Often the most profitable move was for our clients to reduce the grain legume content of their rotations and to increase their pasture percentage.

### *Farming Systems Analysis*

Farm Businesses in the wheatbelt of Western Australia can adopt a range of farming systems which can run from a crop dominant system through to a stock dominant system. For this analysis I have grouped the businesses using crop percentage.

| Farming System       | Crop %  | Description  |
|----------------------|---------|--|
| All Crop             | 90%+    | The only area that isn't cropped is non-arable, salt affected, or difficult to crop due to rocks and creeks etc.   |
| Crop driven pastures | 71%-89% | Pastures or fodder crops are used as a weed control phase only when needed, and pasture rotations may be used on soil types that are not suited to 100% crop rotation. Crops always take priority when making decisions on weed control. |
| Mixed                | 40%-70% | Pastures are a permanent part of the rotation, and are managed to maintain a good clover content and be able to regenerate. Crops do not always take priority when making decisions on weed control.                                     |
| Stock                | <%40    | Crops are grown to provide feed for the livestock enterprise, or clean up pastures. Livestock always take priority when making decisions on weed control.  |

Operating profits per hectare and the return on productive assets need to be used to assess the long term profitability of a farming system. Farmers need to check their own operating profit figures, as the grain legume yield and the profitability of their sheep enterprise has a big bearing on the outcome.

### *Considerations when looking at the data*

The biggest difference between cropping and livestock "fixed operating costs" is the machinery replacement cost or depreciation. To put this into perspective, one large broad acre "machinery unit" or "tractor unit" which comprises, a large 4WD tractor and air seeder, a 36 metre boom spray, and a large capacity header can be used to crop an area of around 4,000 to 5,000 hectares in the central wheatbelt. If a client has a farm of 7,000 hectares, he will need two tractor units for an "All Crop" farming system, or one tractor unit for a 50%-70% Crop or "Mixed" farming system. The capital tied up in a "tractor unit" can vary from \$1,000,000 to \$1,500,000 depending on the age of the equipment. The machinery required to run 8,000 ewes on the other 3000 hectares is only around \$75,000 to \$100,000. There is a difference in the infrastructure required for livestock and cropping, but machinery sheds, fertilizer storage, and grain storage matches the replacement of shearing sheds, fences and water supply required for stock. The repairs and maintenance is higher for livestock infrastructure and in our analysis these costs are included in the livestock variable costs, which is included in the calculation of a gross margin.

Many farmers talk of the ease of management of cropping relative to livestock. This doesn't relate to a difference in the cost of management, but is a lifestyle choice that an owner can make. If this choice is made it should be recognized that it may come at a cost to the business.

What about the cost of stocking 3,000 hectares? The sheep required to stock 3,000 hectares would be \$400,000 to \$600,000 depending on market prices. The good thing about a ewe is that once they are worn out, they can reproduce a replacement for themselves then you can sell them. The costs of replacing stock are therefore calculated prior to the gross margin level.

### *Return on Capital Employed (Return on Farm Assets)*

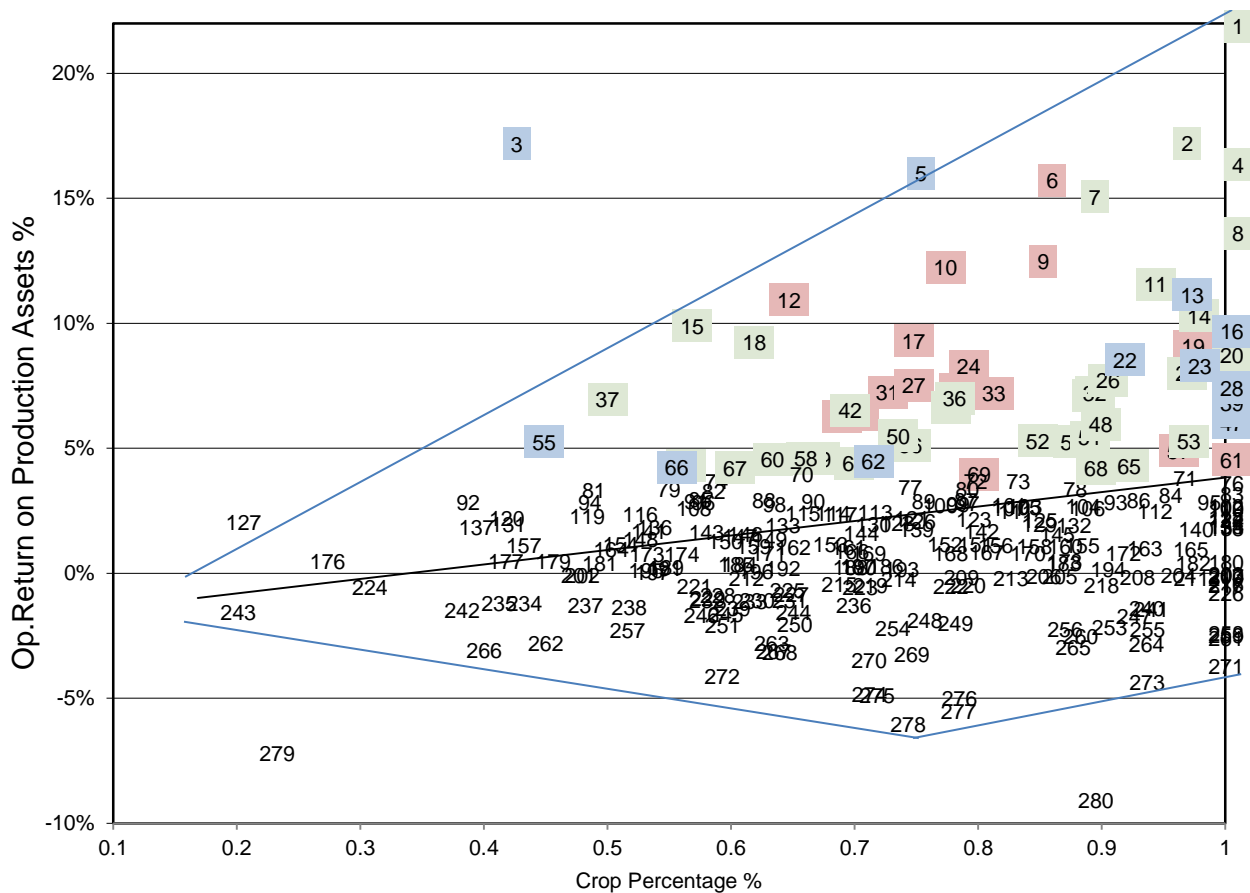
The best way to assess the performance of a business relative to another business, is to use the Return on Capital Employed, or the Return on the Assets of the Farm Business.

The graph in Figure 1 shows the average return on capital of 273 of our clients. There is no strong relationship between cropping percentage and the average return on capital, however the average line shows businesses with high crop percentages have produced better results than businesses with low cropping percentages in the last five years. The most pronounced trend is the increase in the range of results as crop percentage increases. The problem for the pasture based systems is the lowest returns are similar for all groups.

This diagram clearly shows that for any level of cropping percentage there is a large range of profit levels. The factors which contribute to this range, are predominantly management and this factor is more important than which farming system is being used. The soil types, rainfall and infrastructure of a farm may determine what cropping percentages are possible but it is the management of that system which determines the level of return.

The top 10% of businesses (numbers 1 -27) have cropping percentages that range from 50% to 100% crop. Only 15% (4) out of the top 27 are in the mixed farm group, despite this group being 43% of the total sample.

Figure 1: Five Year Average Return on Farm Assets (ROC) FARMANCO Profit Series

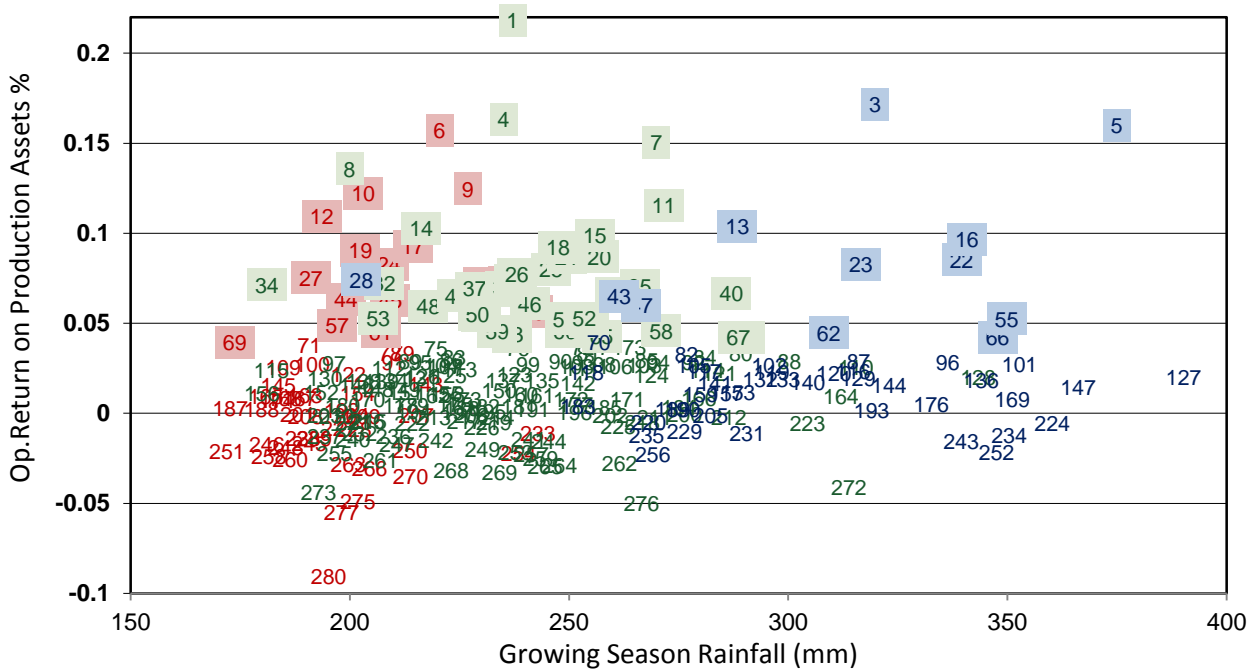


Note :

The points within the coloured squares are the top 25% of businesses for each Rainfall Zone. Red =Low Rainfall, Green=Medium Rainfall, and Blue=High Rainfall.

The graph in figure 2 shows that the range of results in return on assets is not strongly related to rainfall. There is a large range of returns at all levels of rainfall.

Figure 2 : Return on Assets v Rainfall - Five Year Average FARMANCO Profit Series



An overview of the FARMANCO data set is listed in Table 2.

It is important to note that 79% of the sample has pastures in the farming system and only 21% are 100% crop or close to it. In 2005 only 10% of our client base ran an “All Crop system” and it has now increased to 21%.

**Table 2. The FARMANCO Data Set**

| Farming System       | Crop %  | 2005       | 2012       |
|----------------------|---------|------------|------------|
| All Crop             | 90%+    | 30 (10%)   | 57 (21%)   |
| Crop driven pastures | 71%-89% | 115 (39%)  | 92 (34%)   |
| Mixed                | 40%-70% | 116 (40%)  | 118 (43%)  |
| Stock Dominant       | <%40    | 31 (11%)   | 6 (2%)     |
| <b>Total</b>         |         | <b>292</b> | <b>273</b> |

Table 3 shows that the cropping percentage has increased across all rainfall zones with the biggest move in the high rainfall zone. It is reasonable to speculate that a lot of the reason for the increase in the medium and high rainfall has been due to the increase in the area of canola from 14% of the cropped area 2003 to 22% of the cropped area in 2013.

It is also worth noting that the current sample is now more balanced across the rainfall zones with similar numbers in the low and high rainfall zones.

*Table 3 : Cropping Percentage by Rainfall Zone*

| Average         | Cropping Percentage 2004 (no. in Sample) | Cropping Percentage 2012 (no. in Sample) | Increase |
|-----------------|--|--|----------|
| Low Rainfall    | 67% (89)                                 | 72% (63)                                 | 5%       |
| Medium Rainfall | 64% (127)                                | 75% (163)                                | 11%      |
| High Rainfall   | 50% (34)                                 | 67% (55)                                 | 17%      |

## Return on Assets over Time

The rate of return on productive assets over the last 10 years in the West Australian grains industry has been a rollercoaster ride.

The FARMANCO client average is only 3.0% Return on Capital excluding capital growth over the last ten years.

The data in table 4 shows the average returns for each farming system group over the last ten years. From the data it is clear, that on average over the last ten years, the higher the crop percentage of the business the higher the return. The crop dominant system averaged 4.4%, the crop driven 3.4%, the mixed farm 2.1% and the stock dominant made a small loss of -0.5%. The variability of the yearly rate of return is only slightly higher in the crop dominant system with a standard deviation of +/-6.93% compared to the Mixed Farm standard deviation of +/-6.36%.

The conclusion from this data is that over the last ten years the average profitability of the "All Crop" clients is almost double the average of the "Mixed" clients and the variation between years is only 10% more for the "Crop" clients. The slightly lower risk for the business is not worth the much lower returns from mixed farming. It is also clear that the gap between the returns from the "All Crop" and "Mixed" groups has widened in the last five years.

**Table 4. Return on Productive Assets by Crop Percentage Group over the last 10 years**

| Year No.  | All Crop 57 | Crop Driven Pastures 94 | Mixed 122 | Stock 7 | Average 280 |
|---|-------------|-------------------------|-----------|---------|-------------|
| Crop %  | 96%         | 79%                     | 59%       | 30%     | 72%         |
| 2003  | 16.5        | 13.4                    | 10.5      |         | 12.8        |
| 2004  | 2.9         | -0.4                    | 0.03      | 1.9     | 0.5         |
| 2005  | 6.4         | 2.3                     | 2.0       | -5.7    | 3.1         |
| 2006  | -0.1        | -3.0                    | -5.5      | -11.6   | -3.2        |
| 2007  | 15.3        | 12.8                    | 9.0       | -2.6    | 11.7        |
| 2008  | 9.8         | 7.0                     | 5.5       | 4.0     | 6.8         |
| 2009  | -6.5        | -8.2                    | -10.2     | -3.5    | -8.3        |
| 2010  | 2.2         | 0.5                     | -0.7      | 0.6     | 0.3         |
| 2011  | 7.8         | 7.9                     | 5.5       | 2.6     | 6.8         |
| 2012  | 6.8         | 2.5                     | 0.2       | -7.5    | 2.5         |
| 5 yr. average                                     | 5.8         | 3.6                     | 1.8       | 0.4     | 3.2         |
| 10 yr. average                                    | 4.4         | 3.4                     | 2.1       | -0.5    | 3.0         |
| IRR 5 yr. after Finance and Tax (inc. Cap Growth) | 5.0         | 3.5                     | 0.9       | 0.7     | 2.7         |
| *Standard Deviation                               | 6.93        | 6.85                    | 6.36      | 5.20    | 6.49        |

\*68% of values lie within the range of the mean plus or minus 1 standard deviation

## Business Measures

It is worth looking at the financial characteristics of the businesses in each of these groups to see why there is such a difference in profitability.

Table five compares a number of critical measures across the groups. The differences for the "All Crop" group from the rest is more dollars invested in machinery, more efficient with labour to generate income, and 23% more income with the same operating cost %. The amount of dollars left to repay debt or other discretionary expenditure is very similar for the "All Crop" and the "Crop Driven Pastures" at \$21 and \$18 respectively, however the mixed farm and stock system is in the unenviable position of increasing their debt levels over the last five years. The "Mixed Farm" system stands out for the wrong reason which is a well below average income with the poorest operating cost percentage of 64%.

**Table 5. Five Year Average Key Business Indicators for different Farming Systems**

| Farming System             | All Crop  | Crop Driven Pastures | Mixed Farm | Stock    | Average    |
|----------------------------|-----------|----------------------|------------|----------|------------|
| Crop %                     | 96%       | 79%                  | 59%        | 32%      | 73%        |
| <b>No. in Sample</b>       | <b>57</b> | <b>92</b>            | <b>118</b> | <b>6</b> | <b>273</b> |
| Area Farmed                | 3386      | 4248                 | 3161       | 3488     | 3578       |
| Net Equity                 | 80%       | 80%                  | 80%        | 87%      | 80%        |
| Net Farm Debt/Income       | 0.96      | 1.17                 | 1.10       | 0.71     | 1.09       |
| Machinery / Effective ha   | \$478     | \$380                | \$317      | \$217    | \$370      |
| Machinery Value /Income    | 0.89      | 0.79                 | 0.80       | 1.02     | 0.82       |
| GFR /Labour Unit           | 776K      | 697k                 | 572k       | 364k     | 653k       |
| Op. Variable Cost %        | 62%       | 62%                  | 64%        | 61%      | 63%        |
| Fixed Costs                | 32%       | 31%                  | 31%        | 32%      | 31%        |
| Machinery Capital %        | 14%       | 11%                  | 10%        | 8%       | 11%        |
| Infrastructure %           | 1%        | 1%                   | 1%         | 2%       | 1%         |
| Farm Income                | \$539     | \$454                | \$377      | \$367    | \$437      |
| Operating Surplus          | \$70      | \$51                 | \$30       | \$27     | \$44       |
| Finance                    | \$49      | \$43                 | \$40       | \$32     | \$43       |
| Surplus for Debt Reduction | \$21      | \$18                 | \$-3       | \$-5     | \$5        |

### Crop Costs

Instinctively you would think that a higher pasture percentage would lower your crop costs, and that is supported by the data on a per hectare basis. The pesticide costs do increase with higher crop percentages, but I was expecting a bigger difference in fertiliser costs. The mixed Farm group fertiliser costs were only 9% less than the All Crop group.

The more important costs are on per tonne basis and this where the “Mixed Farm” Group was well above average for all crops. The biggest difference was the “Mixed Farm” Canola cost of production which was 18% above the “All Crop” group and above the average FIS price for Canola. This result was particularly surprising given the average canola yield for the “Mixed Farm” group at 1.04 was slightly above the “All Crop” canola yield of 1.02t/ha.

**Table 6. Crop Costs**

| Farming System              | All Crop | Crop Driven Pastures | Mixed Farm | Stock | Average |
|-----------------------------|----------|----------------------|------------|-------|---------|
| Per Hectare costs           |          |                      |            |       |         |
| Cropping Costs (net of CBH) | 293      | 276                  | 271        | 329   | 279     |
| Pesticide Cost              | 65       | 56                   | 48         | 35    | 54      |
| Fertiliser Cost             | 96       | 95                   | 90         | 108   | 93      |
| Per Tonne Costs             |          |                      |            |       |         |
| Wheat Cost \$/t 5 yrs.      | 235      | 236                  | 248        | 231   | 241     |
| Wheat Cost \$/t 10 yrs.     | 217      | 213                  | 222        | 228   | 218     |
| Canola Cost \$/t 5 yrs.     | 511      | 520                  | 600        | 474   | 550     |
| Canola Cost \$/t 10 yrs.    | 492      | 492                  | 579        | 468   | 527     |
| Lupin Cost \$/t 5 yrs.      | 471      | 412                  | 560        | 337   | 485     |
| Lupin Cost \$/t 10 yrs.     | 388      | 320                  | 363        | 337   | 352     |

### Crop Income – Yield by Price

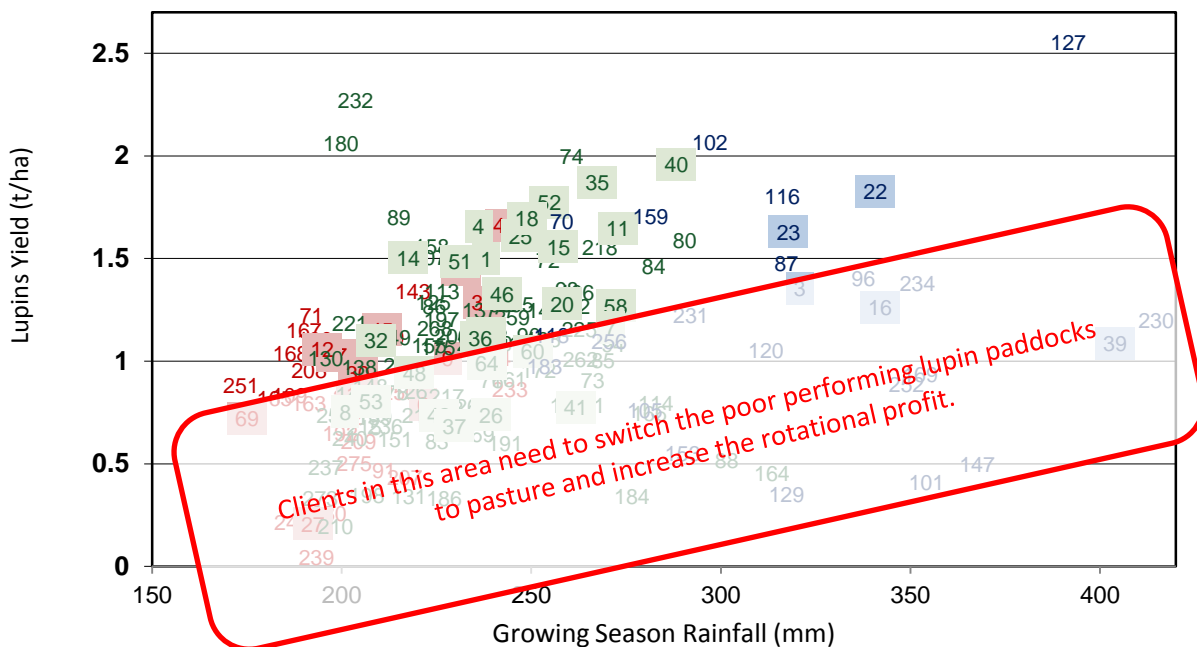
The reality is most rotations are driven by the profitability of Wheat and Barley with Canola playing a bigger role in the central and southern parts of the wheat belt. I haven't Included Barley as it was very similar to wheat. The interesting thing to note from this table is the large effect a small increase in yield and price can make to the surplus that remains after all costs. The “All Crop” Group is ahead of the “Mixed Farm” Group by \$61/ha for Wheat, \$48/ha for Lupins, and is only \$2/ha behind for canola. This explains why the “All Crop” group was \$40/ha ahead of the “Mixed Farm” group in terms of operating surplus.

Table 7. Crop Income

| Farming System      | All Crop | Crop Driven Pastures | Mixed Farm | Stock | Average |
|---------------------|----------|----------------------|------------|-------|---------|
| Wheat Yield (t/ha)  | 2.12     | 1.97                 | 1.94       | 1.65  | 1.94    |
| Price \$/t          | 286      | 282                  | 281        | 267   | 282     |
| Wheat Income \$/ha  | 606      | 556                  | 545        | 440   | 547     |
| Canola Yield (t/ha) | 1.02     | 1.02                 | 1.04       | 1.23  | 1.03    |
| Price \$/t          | 542      | 533                  | 534        | 538   | 536     |
| Canola Income \$/ha | 553      | 544                  | 555        | 662   | 552     |
| Lupin Yield (t/ha)  | 1.24     | 1.18                 | 1.03       |       | 1.13    |
| Price \$/t          | 275      | 273                  | 284        |       | 278     |
| Lupin Income \$/ha  | 341      | 322                  | 293        |       | 314     |

Figure 3 shows the large range in average lupin yields across the average rainfall received. There is a large number of businesses that are growing lupins who shouldn't be growing lupins or should restrict their lupin crops to the more suitable soil types.

Figure 3 Lupin Yields by Growing Season Rain



### Sheep Enterprise Profitability

The main livestock enterprise is a self-replacing merino flock however the numbers of flocks using prime lamb terminal sires, and the number of non-wool sheep meat flocks is increasing. If you are going to have a pasture phase in your rotation it is critical that you are able to run a profitable livestock enterprise to generate a profit from that phase of the rotation. The Stock group is dominated by 4 clients in the high rainfall zone, 1 in the medium rainfall, and 1 low rainfall client. In general the more stock in the system the lower the variable costs and wool is a bigger portion of the sheep enterprise income. The surprising fact is the more stock in the system, the fewer dollars are spent on pasture management per DSE.

On average sheep enterprises have broken even over the last five years. The "Mixed Farm" group sheep profit was \$12/ha above the small loss made by the "Crop Driven Pasture" group. The "Crop Driven Pasture" group did generate a larger gross margin but must have higher fixed costs. This group has managed to more than make up for lower sheep profit with better crop returns to end up with a better Surplus over all of \$51/ha versus the \$30/ha of The "Mixed Farm" group.



Table 8. The Key Indicators in the Sheep Enterprise

| Farming System               | All Crop | Crop Driven Pastures | Mixed Farm | Stock   | Average |
|------------------------------|----------|----------------------|------------|---------|---------|
| Sheep DSE/ha                 |          | 4.31                 | 4.72       | 7.95    | 4.62    |
| Stock Sale Price \$/hd       |          | 77                   | 76         | 87      | 75      |
| Clean Wool Price \$/kg       |          | 9.35                 | 9.79       | 10.17   | 9.54    |
| Clean kg of Wool/WGha/100mm  |          | 5.19                 | 4.99       | 5.77    | 5.47    |
| Sheep Income \$/DSE          |          | \$42                 | \$26       | \$20    | \$36    |
| Wool Income \$/DSE           |          | \$24                 | \$24       | \$21    | \$25    |
| Total Sheep Income \$/DSE    |          | \$66                 | \$50       | \$41    | \$61    |
| Variable Costs \$/DSE        |          | \$35                 | \$30       | \$26    | \$32    |
| Feed Cost \$/DSE             |          | \$6.65               | \$6.63     | \$6.68  | \$6.64  |
| Pasture Management \$/WG DSE |          | \$4.74               | \$3.80     | \$2.68  | \$4.38  |
| GM (\$/DSE)                  |          | \$24.94              | \$23.63    | \$20.91 | \$22.83 |
| GM (\$/ha)                   |          | \$110                | \$98       | \$168   | \$101   |
| Profit (\$/DSE)              |          | -\$1.86              | \$0.85     | \$7.67  | \$0.22  |
| Profit (\$/ha)               |          | \$-8                 | \$4        | \$61    | \$1     |

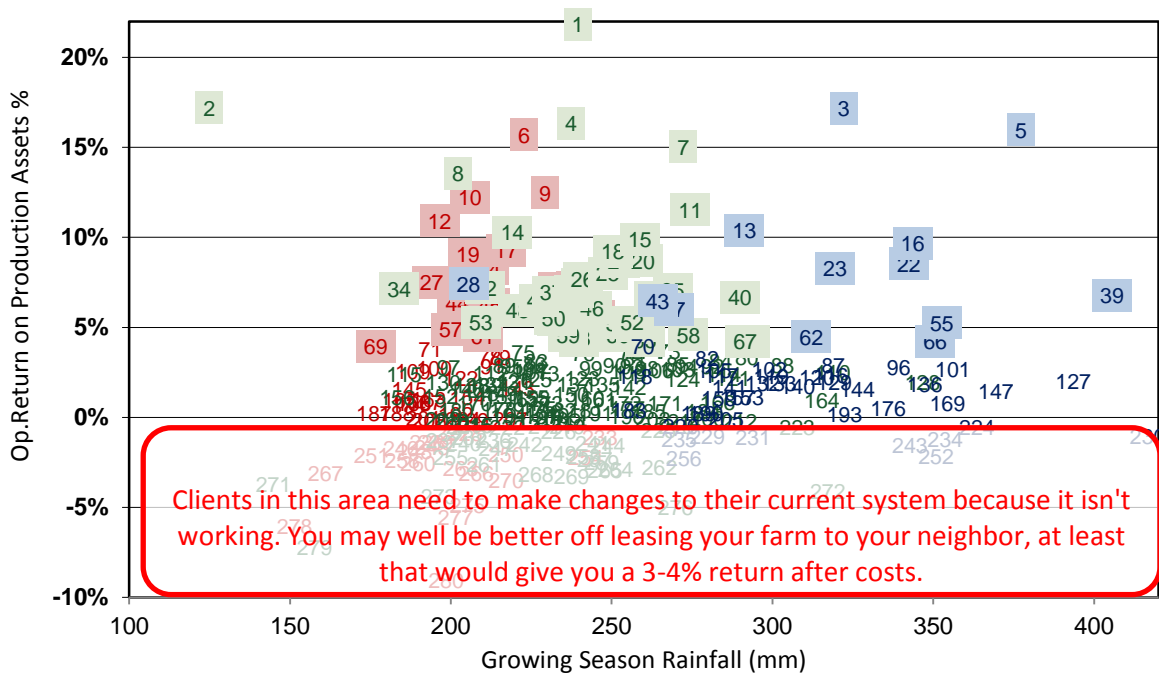
Figure 4 shows sheep operating profit can range from -\$250/ha up to +\$250/ha. Unfortunately there is a lot of flocks showing negative returns. The good news is there are a number of flocks that are producing profit levels in excess of the average "All Crop" group profits, so pastures can be a profit driver but you need to be performing above the average. If your flock isn't profitable you need to find out why and fix it.

Figure 4: Clients with Non Performing Sheep Flocks need to change their sheep system or sell the flock



There is an old saying that if you keep doing the same thing but expect to get a different result then you are operating in an irrational mindset. The graph in figure 5 is clearly testing the rationality of clients that are generating a loss over a five year period and not looking to change their farming system.

Figure 5: Long Term Operating Returns below zero indicate a dramatic change to the Farming System being used is needed.



## CONCLUSION

The optimum crop percentage for your business will be a result of establishing the optimum crop rotation on a paddock by paddock basis. The optimum crop rotation for a paddock will be determined by the sum of all parts of that rotation. Poor performing grain legumes can reduce the overall profitability of a rotation well below that of a 50% pasture rotation. High crop percentage systems are more costly and may put your business at risk, however if it is more profitable it will also have more capacity to recover from a poor year.

A paddock-based analysis needs to allow for the logistics of operating the entire farm. You may deliberately place poor performing paddocks at the end of the seeding program as they will give a lower return for an early sowing opportunity than the best performing paddocks. Some soil types can handle a late sowing better than others, while some paddocks should be sown dry.

The widening gap between the Farming systems greater than 70% crop and the farming systems with less than 70% crop raises some critical questions for those clients who have a cropping percentage less than 70%.

- Why isn't my business in the top 10%?
- Is your current farming system generating the best return? "What is the most profitable Farming System for the whole business?"
- Should you change your system or tweak the non performing parts of the system?
- Are you losing profit through unproductive complications to your farming system which is taking you away from the tasks that make you money?
- Is the lack of profit now preventing my business from being profitable in the long term?
- Can I generate sufficient profits to repay debt?
- If your Farm System includes pastures, "how do I generate the best return from the pastures being grown?"
- How do I check that I have the best system in place?
- How do I monitor the system so that I know what changes are needed to keep my business generating a good return?

If you can provide yourself with satisfactory answers to these questions then relax. If you can't you need to make some changes and put some systems in place so that you can.