Hort Innovation

Final Report

Vegetable Business Benchmarking

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vegetablesWA

Project code:

VG17000

Project:

Vegetable Business Benchmarking VG17000

Disclaimer:

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Content

Public summary

Project VG17000-WA successfully delivered Western Australia's and Australia's first 3-year vegetable industry benchmark dataset. It has published three Industry Benchmark reports and has also produced the first set of 3-year averages, as well as single year averages, across 42 key business performance measures and metrics.

While the title and scope of the project is 'Vegetable Business Benchmarking', the truth is that it has proven to be much more than the title indicates. It has been an identifier of key industry risks and issues, educator of business and financial management, provider of strategic and operational consultancy as well as a key source of trusted industry data for industry stakeholders (ranging from industry bodies and State/Local Government to major financial institutions). This is in addition to improving business physical and financial performance through practise change informed by data driven decision making, which was the stated end of project outcome.

The ability to more deeply investigate and produce meaningful data about key issues within the vegetable industry has been proven by this methodology.

Key high-level industry findings were:

- With a 3-year average Return on Capital of 9%, the Vegetable Industry is capable of generating a positive return that is comparable with any other industry or investment type. There is however a wide range of results.
- The most profitable producers were not necessarily the largest producers in terms of land area utilised.
- The most profitable growers (as measured by vegetable operating profit per hectare) were not those from a particular area, of greater scale or a particular vegetable type, but those that were able to achieve a higher income per hectare, through increased saleable yield and a strong focus on marketing their product, while keeping costs as a percentage of income below 65% (3-year average was 72% while the Top 25% average was 59% operating efficiency).

At a summary level, the following results were found across participating growers:

	Between Year 1 and 2	Between Year 2 and 3
Change in Return on Capital	+5%	-0.03%
Change in Operating Profit (per Hectare)	+$500/ha	+$931/ha
Change in Operating Efficiency (costs as percentage of income)	+0.9%	-0.25%

Having gathered and analysed their data, each participating grower received an individualised benchmarking report specific to their business that was delivered personally as part of a 90-minute interpretation and action planning support meeting that helped growers to convert findings into tangible actions.

The analysis within the report provided both their own business production and financial analysis as well as a 'comparison' against industry averages and best in class performance.

It was these key steps in the process that focused on improving the farm management decision making of those business owning growers who participated – an assertion backed up by a catalogue of case studies and survey responses as well as financial metrics. Key to facilitating this has been the very 'hands on' support provided through the execution process to growers to a) understand the data that was required to participate, and b) then convert findings into tangible actions.

The project included growers from across the majority of WA, from Carnarvon and Geraldton, through Gingin and Metro Perth down to Myalup and Manjimup. It analysed data from the full range of vegetable crops grown for FY 2016-17, 2017-18 and 2018-19.

The project consciously decided to engage vegetable growers across Western Australia specifically as vegetable

business owners by strategically making vegetable production profitability the key focal point of the project and linking all communications, measures and metrics back to this.

The reason behind this decision is that profitability, both on a short- and longer-term view, ultimately dictates and shapes all decision making behind a successful and sustainable business – vegetable or otherwise.

Participation rates grew over the 3 years with Year 3 covering 30% of the state's sold production for FY 2018-19.

The most significant challenge to project progress was the incumbent levels of business and financial management maturity across business owners in Western Australia which did not meet the base levels assumed from the outset of the project. The project therefore identified a significant industry level issue – something later verified by a wide range of agri-finance institutions - that has serious ramifications for the future prosperity of the industry, both in Western Australia and potentially in other states, if left unaddressed.

Set against this background, the project was very successful in delivering tangible individual business level benefits (as captured in the catalogue of case studies). It was also successful in supporting a development of strategic thinking among the participants, instigated by the focus on data driven decision making through this project, that has translated into beneficial changes that have been executed that extended beyond mere focus solely on economics and profitability.

It is also worth noting that the initiative, through vegetablesWA partnership with farm consultants Planfarm, has been shaped on the hugely successful 40+ year similar initiative that has routinely served the Western Australia Broadacre industry so successfully. A key success feature is the rolling 6-, and 10-year averages that provide such a solid foundation for financial and business decision making of farmers and associated stakeholders (e.g. financial institutions) in that industry. Again, note that nothing of this nature existed in the Horticulture industry in any meaningful format that is directly useful to the actual business owners until the 3-year average was analysed this year; however a 3-year average is still short of a 6 or 10-year average and the financial business management rigor that that brings.

Recommendations for future R&D from this project are:

- Capitalise on the hard-fought momentum of this project and extend the project to reach a tipping point of industry-wide management change that will install benchmarking and a more detailed data driven decision making practise as part of 'business as usual'.
- In a current commercial environment that commoditises business data and insights, continue to support horticulture industry collected and owned data to serve the horticulture industry rather than leave it larger outside corporate bodies.
- Formally recognise and further investigate the issue relating to levels of Financial & Business Management capacity across sectors of Horticulture in Australia, and fund specific initiatives to address this key issue in order to support a profitable and sustainable industry going forward.
- Development of a catalogue of extension and grower engagement best practises that future Hort Innovation funded projects can draw upon to support greater successful grower engagement and impact towards delivering outcomes.

Keywords

Vegetable Benchmarking; Western Australia Vegetable Benchmarking; Vegetable Industry Profitability; Vegetable Industry Return on Capital; Vegetable Industry Cost of Goods; Vegetable Industry Operating Efficiency; Vegetable Business Financial Performance; vegetablesWA; Planfarm.

Introduction

The process of benchmarking directly supports the targeted delivery of the Strategic Investment Plan Outcome 5: Improved industry capabilities for adoption and innovation, Strategy 5.4: Farm management and information systems (this includes Benchmarking). Improve farm management practices and systems to help growers with efficient and effective decision making.

Hort Innovation previously identified in 2017 an informational gap for growers in the vegetable industry that provided the next level of useable detail down from the broad trend of performance provided by the annual survey conducted by the Australian Bureau of Agriculture Resource Economies and Science (ABARES).

This gap had also been earlier identified in 2016 by vegetablesWA, the peak industry body representing vegetable growers in Western Australia.

Prior to commencement of this project and through its own funded feasibility and scoping research, vegetablesWA found that benchmarking was the most appropriate solution to enable and commence targeted support to equip growers to make higher quality data driven business management decisions, as well as providing much needed, and previously absent, rigorous industry level insights in terms of financial and production performance.

Benchmarking has been successfully utilised in a variety of agriculture (dairy, grains, viticulture) and horticulture instances; indeed, Hort Innovation have previously funded benchmarking initiatives in the olive (OL16001), banana (BA10026) macadamia nut (MC09001) and avocado (AV11026) sectors.

One of the most notable examples of benchmarking success, in terms of longevity and impact on business practices, is the broadacre benchmarking initiative in Western Australia managed by Planfarm Pty Ltd. Planfarm now have over 40 years of continued data collection and analysis from approximately 550 broadacre farmers per annum within Western Australia. The annual publication of the single year, as well as 6- and 10-year rolling averages, continue to play a key role in underpinning the decision making that has resulted in such significant and consistent financial and productivity returns over a long-term perspective in that particular agriculture industry sector.

In fact, collecting, analysing and publishing benchmarking data and then using that as a routine management practise to inform business decisions is considered the ‘base level of adequacy’ in any mature industry regardless of sector. Absence of any such accessible financial or performance data in tandem with a gap in the capability to interpret and act on it by the key players is a significant barrier to development in any industry and should be considered as a widespread risk that needs to be acted on. It also further impacts the capacity of any supporting institution (particularly financial) to confidently provide the necessary supporting resources as well as undermines any business case for any future-focused Research and Development investment.

In order to begin the process of meeting the aforementioned information gap, vegetablesWA partnered with Planfarm to conduct a vegetable benchmarking initiative across the vegetable industry within Western Australia.

To achieve this, from the outset the project chose to engage vegetable growers across Western Australia specifically as vegetable business owners; a subtle but important point so often overlooked in Extension activities across the vegetable industry.

This was underpinned by strategically making the key focal point of the project centred on profitability and linking all communications, measures and metrics back to this key business focal point.

The reason behind this decision is that profitability, both on a short- and longer-term view, ultimately dictates and shapes all decision making behind a successful and sustainable vegetable business, and by default the whole industry; again, a subtle but important point.

The project has achieved this through the following key focused design features and key activities:

- Defining a proven and coherent set of key financial and production metrics to drive profitability within a vegetable business.
- Collecting and verifying individual business data with a specific focus on business financials for the year of effort (or production year) as distinct from tax financials. The latter is simply that, a set of financials to deal with taxation. This project deals with financials relating specifically and only to business performance.

- Analysing key business financial and production metrics both on an individual farm and collective industry level.
- Producing simple and straightforward reports from the analysis at both individual business and whole industry levels.
- Spending time with growers to develop their capability and capacity to understand the results and findings in order to 1) support them to convert said findings into tangible actions to improve profitability, 2) experience the need to continue to gather relevant data, and 3) provoke a movement towards making more data driven decisions going forwards.

While the title of the Project is 'Vegetable Business Benchmarking', the truth is that it has proven to be much more than title indicates. It has been an identifier of key industry risks and issues, educator of business and financial management, provider of strategic and operational consultancy as well as a key source of trusted industry data for industry stakeholders (ranging from industry bodies, State and Local Government to major financial institutions).

Methodology

Overview

From its early beginnings in the 1970s (most notably at Rank Xerox), benchmarking has become a globally recognised standard business management and improvement practice that is now routinely carried out across a multitude of commercial industries, government and public-sector agencies and not for profit organisations.

Benchmarking is a key tool to understanding industry best practise and managing key drivers of productivity, quality and profitability.

Benchmarking is a process of measuring performance, services, or processes against those of other businesses considered to be the best in the industry as well as industry averages. The point of benchmarking is to identify internal opportunities for improvement - you can only manage it better if you measure it!

Timescale and Reach

The project has been managed by vegetablesWA in partnership with Planfarm.

The project ran over 3 annual cycles of benchmarking:

- Year 1 – collecting FY 2016/17 data
- Year 2 – collecting FY 2017/18 data
- Year 3 – collecting FY 2018/19 data

Access to participate was available to all vegetable growing business owners across Western Australia.

Key Areas of Focus

The final outcomes, both at an industry and individual business level, were focused on three levels of business ownership to provide a holistic view on the performance of the business.

The three levels are:

1. Business Investor: focused on capital investment and return through key measures that include Return on Capital, Equity % and Debt Level.
2. Business Operator: focused on the profitability performance of the business on a year to year basis through key measures that include Operating Efficiency (Operating Costs as a % of Income), water use and employment efficiency ratios.
3. Vegetable Grower: focused on the individual profitability of the crops produced through key measures that include a detailed Individual Profit and Loss breakdowns for each crop.

The analysis provided the business owner with two levels of understanding of the performance of his/her business across 42 individual key metrics and measures:

- 'Singular review from within' by understanding the results and findings of the analysis of the business in and of itself.
- 'Comparing against others' when benchmarked (often by a 'per hectare' normalisation) against industry averages and the averages of the Top 25% performers (in terms of Operating Profit per hectare) to expose comparative performance.

Further detailed breakdown of the data points and analysis can be seen in Project Outputs dataset architecture (submitted with Milestone Report 102) and Financial Review Report Structure and Benchmarking Report Structure (Submitted with Milestone Report 105)

Sources of Information

Initially, the primary sources of information for participation were:

- The business owner

- The business cashbook of financial recording system
- Tax return – Asset & Liability and the Profit & Loss Statements
- Production logs or records
- Insurance policies
- Any relevant licences – e.g. water

As the project proceeded an issue arose with the lateness in which many growers receive their completed tax return from their accountants – a key information source. This was impacting directly on participation rates and project timelines, therefore the project began to request Financial Management Reports directly from the financial software packages for each business.

Activities

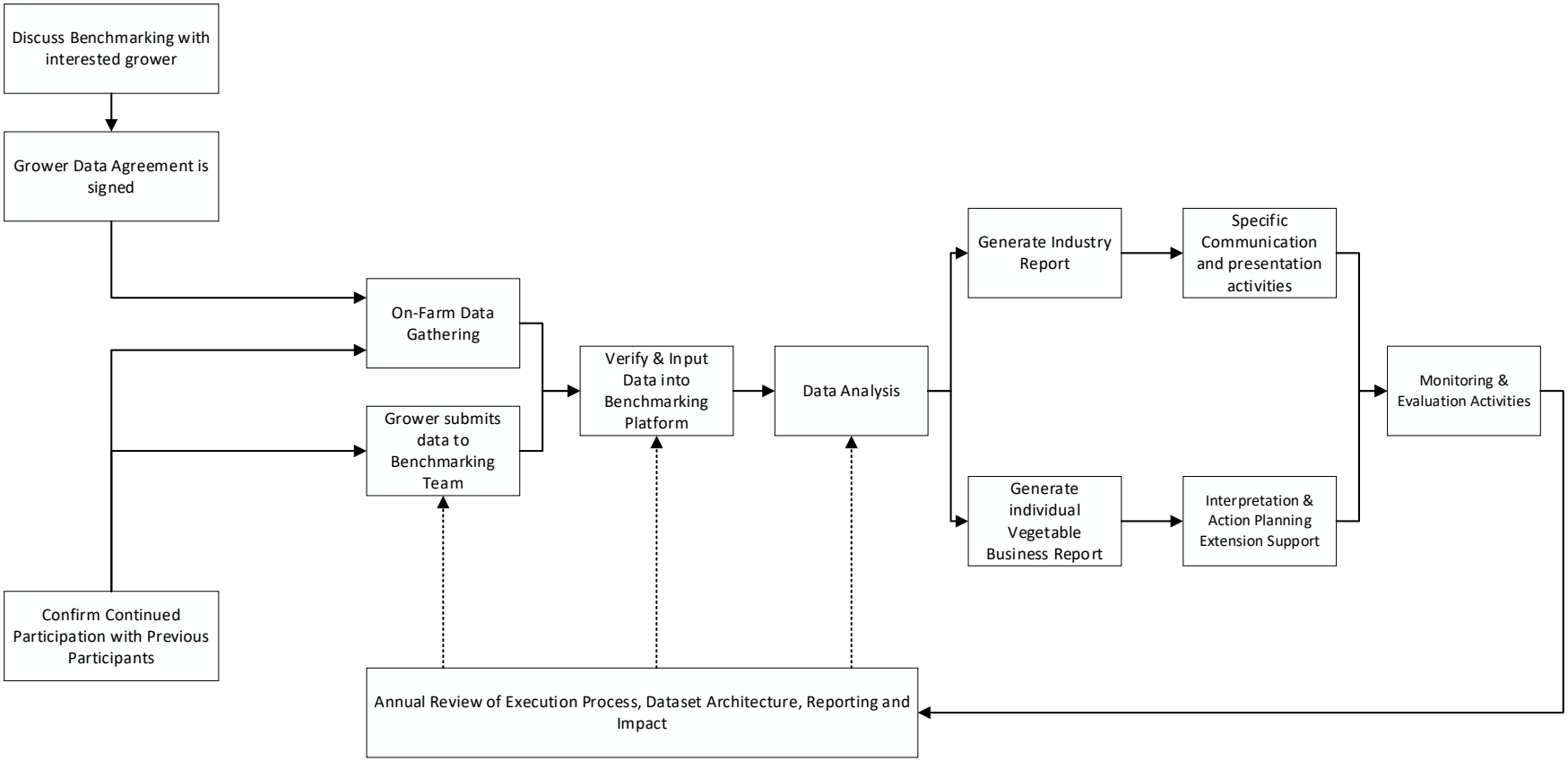
Activities can be separated into two main groups:

1. Foundational enabling activities, and
2. Benchmarking execution process.

Foundational enabling activities included:

- Development of the Vegetable Benchmarking Dataset Architecture: detailed the underlying 'architecture' of vegetable benchmarking and specified the definition, units, data quality requirements and sources for each data point that was collected. It also specified key performance metrics and analysis that indicated how growers compare against best practice measurements. The Dataset Architecture was developed leveraging the 40+ years of broadacre benchmarking experience brought to the project by partners Planfarm and in consultation with a group of vegetable business owners – however it should be noted that initial input by growers was fairly limited due to the lack of experience and business maturity levels. It was reviewed at the end of each of the benchmarking annual cycles.
- Development of Grower Data Agreement: the legal documentation that clearly lays out the position and processes relating to data confidentiality, ownership and usage for all stakeholders.
- Development of Benchmarking Platform: the adaptation of the proven Planfarm broadacre model for the collection and analysis of vegetable data. A vegetable benchmarking data capture template was also developed to make the data capture as straightforward as possible.
- Development of the Benchmarking Reporting functionality: generated the industry level group and individual reports that visualised results once analysis was complete.
- Development of Grower Portal: online portal to securely store and distribute reports to growers during the project.

Benchmarking execution process



Key Points of Note:

- Only project staff were permitted to enter the data into the Benchmarking Platform following rigorous verification.
- The Interpretation and Action Planning Extension Support that was key to supporting the interpretation of the individual grower is provided by both vegetablesWA project staff (leveraging the Vietnamese extension officer) and Planfarm consultants. For Years 1 & 2 the support was delivered on-farm. For Year 3 is delivered online via Zoom software due to restricted travel due to Covid-19 Governmental Decisions.
- All these activities are key to directly facilitating and delivering the major outcomes of the project of supporting high quality planning and decision making and also to encourage continuous improvement.

Outputs

Below is a full list of all outputs that have been delivered during the lifespan of the project.

Milestone 102

- Planfarm benchmarking model and dataset architecture for year 1 - (Submitted to Hort Innovation with milestone report)
- Project plan, Communication/stakeholder engagement plan, Risk management plan - (Submitted to Hort Innovation with milestone report)
- Grower Confidentiality Data Agreement
- Project M&E plan - (Submitted to Hort Innovation with milestone report)
- Project specific communications material - (Submitted to Hort Innovation with milestone report)

Milestone 103

- Deidentified dataset for Year 1 of benchmarking – (Submitted to Hort Innovation with milestone report)
- Key analysis points for year 1 – (Submitted to Hort Innovation with milestone report)
- Sample Individual Grower Benchmarking Report – (Submitted to Hort Innovation with milestone report)
- FY 2016-17 Vegetable Industry Benchmark Report – (Submitted to Hort Innovation with milestone report)
- Project specific communications material - (Submitted to Hort Innovation with milestone report)

Milestone 104

- 7 Regional information share workshops, plus presentation at West Australian Horticulture Update
- Updated database
- Project specific communications material - (Submitted to Hort Innovation with milestone report)

Milestone 105

- Deidentified dataset for Year 2 of benchmarking – (Submitted to Hort Innovation with milestone report)
- Financial Review Report Structure – (Submitted to Hort Innovation with milestone report)
- Benchmarking Report Structure – (Submitted to Hort Innovation with milestone report)
- Report generation capability from benchmarking database
- Secure Grower Portal for housing and distributing confidential benchmark reports
- Project specific communications material - (Submitted to Hort Innovation with milestone report)

Milestone 106

- FY 2017-18 Vegetable Industry Benchmark report - (Submitted to Hort Innovation with milestone report)
- Project specific communications material - (Submitted to Hort Innovation with milestone report)

Milestone 107

- Deidentified dataset for the 3 years of benchmarking – (Submitted to Hort Innovation with milestone report)

End of Project Report

- FY 2018-19 Vegetable Industry Benchmark report - (See Appendix A)
- 3-Year averages for the Western Australian vegetable industry - (See Appendix B)

Outcomes

Participation rates grew over the 3 years with Year 3 covering 30% of the state's sold production for FY 2018-19. Final participation rates were below initial expectations stated in the Monitoring and Evaluation Plan at the start of the project.

The major reason behind the shortfall was an initial working assumption that there was a base level of adequacy in place relating to the business and financial management maturity levels held by the majority of business owners across vegetable industry of Western Australia from the outset of project.

This specific key business capability had not been the focus of targeted investigation prior to the project and therefore was unquantified. Furthermore, the initial target set in the Monitoring and Evaluation Plan was considered a conservative estimate by broadacre farming standards (drawing on the wealth of experience of project partner Planfarm in the more mature benchmarking environment of broadacre agriculture).

Despite this, the project was able to produce statistically rigorous results and insights previously absent for the vegetable industry, and while the lower than originally forecast participation rates could be levelled as a challenge to the outcomes delivered by the investment, it could also be argued that the project exceeded its original scope by specifically identifying a previously unrecognised industry risk and proactively beginning the process of addressing it directly.

Key Summary Level Findings Across the 3 Years

- Vegetable Industry is capable of generating a positive return that is comparable with any other industry or investment type. There is however a wide range of results.
- The most profitable producers were not necessarily the largest producers in terms of land area utilised.
- The most profitable growers (as measured by vegetable operating profit per hectare) were not those from a particular area, of greater scale or a particular vegetable type, but those that were able to achieve a higher income per hectare, through increased saleable yield and a strong focus on marketing their product, while keeping costs as a percentage of income below 65%.
- The most profitable growers were also focused heavily on vegetable production, allocating 90% of their area to growing vegetables.
- There are easy changes to improve profits for those with lower results.

Key Financial Markers of the Top 25% of Growers (in terms of Operating Profit per Hectare).

- The top 25% of growers managed to produce more vegetable income off the same area as the average grower.
- They had the lowest 'other farm enterprise' profit per hectare when compared to the average and bottom 25% of growers, suggesting that the top 25% of growers are focussed solely on maximising the profitability of their vegetables. Other farm enterprise refers to any other farm enterprise income other than vegetables limited to by this study such as (but not limited to) livestock, fruit, contracting, resources (e.g. gravel) etc.
- The top 25% of growers were the most efficient at utilising their labour inputs, which is the single largest cost for all vegetable growing enterprises.
- The top 25% also demonstrated a high level of Financial and Business Management acumen and valued record keeping, which was found to be directly related to the management skill within the business rather than the scale of the business.

More detailed findings can be found in FY 2018-19 Vegetable Industry Benchmark report - (See Appendix A) and the 3-Year averages for the Western Australian vegetable industry - (See Appendix B)

End of Project Outcomes

The state End of Project Outcome was Improved Business Physical and Financial Performance through Practise Change.

In terms of top-level financial performance, the project noted the following results

	Between Year 1 and 2	Between Year 2 and 3
Change in Return on Capital	+5%	-0.03%
Change in Operating Profit (per Hectare)	+$500/ha	+$931/ha
Change in Operating Efficiency (costs as percentage of income)	+0.9%	-0.25%

While there was improvement in terms of Return on Capital and Operating Efficiency increased between Year 1 and 2 but levelled between Year 2 and 3, the Operating Profit continued to increase strongly throughout the project.

In terms of success stories in relation to impact through participation in the benchmarking project, there have been the following most notable cases (note growers request for confidentiality in reporting these cases):

Lowering overheads

- Example 1: Grower finance ratios recognised by financial review and benchmarking process as being high. Approached the bank and finance restructure resulted in just over $81,000 reduction to annual finance cost.

Reducing operating costs

- Example 2: Grower producing 27 lines of vegetables on small land area to improve market access and labour efficiencies. Analysis of individual vegetable line profitability uncovered loss making vegetables. Grower changed production program and is re-negotiating contracts for profit making vegetables. Forecast is for higher profit with lower risk due to reduced operating costs.
- Example 3: Detailed scrutiny of yield and labour efficiency to inform future mechanisation investment to improve operating efficiency

Investor models

- Example 4: Grower looking to expand in area where there is a niche for production of a particular vegetable. Using 3 years of benchmarking data to provide accurate business income and expenses along with return on capital projections to potential investors. Investors now have robust business model and data to assist decision.

Succession planning and family business stability

- Example 5: Family owned business with majority family members working in the business in management roles. Using 3 years benchmarking data and individual enterprise analysis (farm, processing, transport & administration), the family were able to identify areas of growth, capital investment and downsizing. They have instigated the beginnings of a family advisory board with the aim to have regular communication meetings and financial accountability of all areas of the business. The advisory board will also be used to start succession planning discussions.

Business re-structure

- Example 6: Major business with issues and viability identified recommendations for future business structure to course correct. Also conducted a veg line analysis which lead to review of current contracts

with marketers.

- Example 7: Totally re-ignited business owners' energies on the operating business. Identified steps to further shape the business to pursue opportunity of operating business to be sold to potential investors in the future.
- Example 8: from veg line analysis, changed crop selection to improve profitability to return the business to a financially stable position. Improved quality of life as the new crop selection has freed time to invest in life beyond the farm.

Improving water use efficiency

- Example 9: Detailed analysis of yield, margins and water use to inform future investment into infrastructure to improve water use efficiency. This example was from open field to more intensive glasshouse tunnels.

There are also 3 video testimonials that can be watched at www.vegetableswa.com.au/benchmarking. There are also 2 recorded presentations of experienced vegetablesWA and Planfarm staff explaining in greater depth the Year 2 FY2017-18 and Year 3 FY 2018-19 results and findings.

Intermediate Outcomes

The 4 stated Intermediate Outcomes were:

- Knowledge of data – growers and industry are aware of the benchmarking data outputs
- Attitude towards wanting to collect, use and engage with the data in their business
- Skills in using the data, growers have the capability to interpret data and convert findings into tangible next steps
- Aspirations – growers show willingness to improve practices based on data insights

As stated in the M&E Planning Document for the project, participants were asked to complete a questionnaire in order to assess the intermediate outcomes. This was completed at the end of Year 2 and 3.

In the table below the average score is presented for all who completed the questionnaire (score out of 5).

	Year 2	Year 3
I have a greater knowledge and understanding of how to improve business management practices based on the benchmarking findings for my business	4	4
I have improved my ability to use specific financial and management data to support business decision making.	4	4
I have a greater willingness to collect and analyze data to support business decision making.	4	4
I have a greater willingness to continue to participate in the benchmarking program and make it a regular business management practice	4	5
I have a better understanding of the management constraints in my business	4	4
I have a better understanding of the production constraints in my business	4	4
As a result of my involvement in the project, I have generated increased profitability for my business.	3	4

As a result of my involvement in the project, I have generated increased productivity for my business.	3	3

Monitoring and evaluation

5 Key Evaluation Questions were set out in the Monitoring and Evaluation Plan at the start of the project across the 4 main themes.

Q1. Effectiveness - To what extent has the project achieved its expected outcomes?

As seen in the previous section, with average scores of 4 (out of 5) for survey questions such as *'I have improved my ability to use specific financial and management data to support business decision making'* and *'I have a greater willingness to collect and analyze data to support business decision making',* it is clear that the project has demonstrated that the approach and the methodology have achieved the expected outcome of improving the farm management decision making of those business owning growers who participated.

Furthermore, the Success Stories listed above, as well as the 3 video testimonials, add further tangible weight to this position.

Indeed, what sits behind the Success Stories and the 3 Video Testimonials is now a greater development, openness and appreciation of strategic thinking among the participants, provoked by the focus on decision making through this project, that has translated into beneficial changes that have been executed that extended beyond mere focus solely on economics and profitability. What the project has witnessed is a greater alignment in business process structuring and execution to the now specific strategic goals of the participants that is yielding the scores and the qualitative evidence listed above.

It should also be noted the increase in the average score from 3 to 4 (out of 5) for the survey question *'As a result of my involvement in the project, I have generated increased profitability for my business'*. While many growers stated that it was difficult to place increased profitability solely on participation in the vegetable benchmarking project, all noted it's impact which was reflected in it's increase in score.

Q2. Relevance - How relevant was the project to the needs of intended beneficiaries?

As explained above the participation rates fell short of the originally stated levels at the outset of the project. While this traditionally is a key indicator to question the relevance of a project investment, it is argued that the opposite is true in this case.

As stated, the project was successful in identifying a significant issue in the business and financial maturity levels of business owners within the vegetable industry in WA – something further verified by key Agri-Financial institutions. Given the importance of this capability gap and that the approach by its nature educated growers directly with live data relevant to their own business, it therefore could be argued that the relevance of this project became greater than was originally envisaged at the start.

With average score of 4 (out of 5) for survey questions such a *'I have a greater knowledge and understanding of how to improve business management practices based on the benchmarking findings for my business', 'I have a better understanding of the management constraints in my business'* and *'I have a better understanding of the production constraints in my business'* there is strong evidence of relevancy among the participating growers.

Indeed, in the final year there was an average score of 5 (out of 5) for the survey question *'I have a greater willingness to continue to participate in the benchmarking program and make it a regular business management practice'* indicating that all want to continue participating.

A 3-year dataset has produced 3 published Industry Benchmarking reports and has also produced the first set of 3-year averages, as well as single year averages, across the key business performance measures and metrics. The first of its kind, it has been well received by growers and stakeholders across the industry.

The structure of the individual reports, designed from the extensive broadacre benchmarking experience of partners Planfarm, were initially at an advanced level when compared to the incumbent financial literacy levels of the majority of participants. However, this ended up provoking a greater educational opportunity for most growers in order to fully understand it. Furthermore, all consulted agri-finance institutions welcomed the report structure noting the gap in information routinely presented by vegetable business owners when

attempting to secure further finance.

The project has now routinely produced the first set of coherent financial performance and profitability metrics for the vegetable industry in Western Australia and Australia from the farm level up. In presenting this information at a variety of events – ranging from grower information workshops to wider industry stakeholder presentations - the project has now provoked a deeper conversation and contemplation about vegetable industry based on tangible data rather than assumption. This has led to a growing interest and demand for more data from all industry stakeholders, which further demonstrates relevance of the project to industry.

Q3. Process Appropriateness - How well have intended beneficiaries been engaged in the project?

The unique advantage vegetablesWA has as a peak industry body is that through its relationship with the Agriculture Produce Commission - Vegetable Producers Committee, it receives a depth of data that identifies all growers across Western Australia as well as the veg lines that they grow. It is upon this data that vegetablesWA has built its grower contact database which in turn has informed and directed all awareness and communications activities for this project.

Therefore, efforts have been made to make all 850+ growers across Western Australia aware and welcome to the project.

Additionally, all required milestone and progress reports have been completed on time and to a sufficient level of detail for Hort Innovation, vegetablesWA Committee of Management and the Department of Primary Industries and Regional Development (co-funders).

The project has also taken a very proactive approach to communication with Hort Innovation, raising a Project Variation submission well in advance of an issue eventuating.

Q4. Process Appropriateness - To what extent were engagement processes appropriate to the target audience/s of the project?

There were three key focus areas in the engagement process that were specifically tailored, and amended during the project, to successfully engage growers:

1. Initial awareness and enrolment

From an awareness engagement perspective, drawing from the vegetablesWA grower contact database all 850+ growers have received eNews emails, specific emails, invitations to workshops and webinars as well as specific articles in the quarterly WA Grower magazine throughout the lifespan of the project.

Articles have also appeared in national publications including Ausveg Magazine and Freshplaza.

While participation has been open to all grower members of vegetablesWA, specific growers have been further targeted with phone calls, texts and farm visits.

Therefore, efforts have been made to engage all 850+ growers across Western Australia in order to make them aware of the project.

The greatest challenge to the project was in the enrolment process.

The project was continually challenged by the frenetic nature of operating a vegetable business in Western Australia and the impact on the business owner. Often the project was forced to repeatedly compete for attention both in the initial ‘marketing’ phase with potential new participants as well as in the data gathering phase. Spending focused time considering ‘on the business’ issues is not a common practise among many business owners who are more drawn or comfortable focusing attention to the day to day ‘in the business’ operating activities.

Cause for this can be cumulative and potentially range from long ingrained habit through to links to low financial and business management maturity levels mentioned previously.

The impact was felt throughout the project execution process with growers cancelling pre-arranged meetings at short notice, not following through on commitments or not being ‘present’ during key meetings due to

surrounding issues. The result was large time and effort expended on managing growers throughout the process taking up resources that was originally allocated to bringing in further new participants.

2. Data collection and input support

Given the newness of benchmarking in the industry and the low priority levels by growers in relation to record keeping, the decision to specifically work closely (often on-farm) with growers to support them to gather up their relevant records and then enter their data into the benchmarking platform on their behalf was critical to the project success and reliability of the results.

If this engagement decision had not been taken and this activity was left to the growers to complete the project would have potentially failed to get off the ground and/or produce any reliable results.

3. Data interpretation & action planning visits

Again, with the newness of benchmarking in the industry and the stated maturity levels of the business and financial management capabilities of the participants, the data interpretation & action planning visits were critical in terms of educating growers and converting findings into actions

Without this engagement step, the project would have delivered little to nothing in terms of true impact of outcome.

Beyond the focus on the growers, all funders, key stakeholders and key Agri-Finance institutions were engaged to ensure final outputs meet demands and requirements.

Q5. Efficiency - What efforts did the project make to improve efficiency?

The execution process was continuously analysed and updated to reduce the demand on grower's time required to participate. This was actively undertaken to a) not overly disrupt participating growers from running their businesses, and b) increase execution efficiency.

The major touch point in the execution process, in terms of actual grower participation of time and effort, was the data gathering step of the process. Lists and instructions were provided and updated throughout the project lifespan in order to guide the grower and make it as straightforward as possible. Where needed extra visits back to a grower's farm were undertaken in the interests of gathering reliable and complete data.

Overall many participating growers indicated that without taking this action many would not have successfully completed participation. What was pleasing in Year 3 of participation, was a majority of the Year 1 participants proactively emailed their data to project personnel to analyse and thus the initial investment of time paid off with a very efficient participation and reduced time demand on the project resources by this particular group of participants.

From the outset in Year 1, the project found that the level of Business Management maturity and corresponding business performance data routinely gathering by growers was significantly lacking. Basic data points such as kilograms of vegetables produced, breakdown of allocated costs to an individual vegetable line, splitting costs between growing and processing, kilolitres of water used to produce a vegetable and general information such as fertilizer amounts applied.

It quickly became apparent that this lack of collected data would create a major issue for the analysis of the data and, in turn, undermine the potential maximum actionable value to the grower. Thus, the issue was how to add actionable value to the grower on a finer detailed level in their final report when only enterprise level detail existed.

The project responded quickly to this issue by creating and utilizing what was referred to as a cost splits worksheet – initially built in excel but later housed in the benchmarking platform. Drawing on information from Profit and Loss accountant documentation, the worksheet was designed to allow growers to allocate a percentage of an expense to each vegetable and other nonvegetable line.

This was a significant success that quickly produced detailed and powerful results to growers that had not previously considered the performance of individual crops, and their associated inputs usage and costs, to such detail. It

allowed for the meaningful comparison of vegetables to vegetables in the end benchmarking report and instigated significant management decisions and changes as a result.

The project also decided to review the list of data sources in the interest of execution efficiency during the project.

Initially the project drew financial information from financial tax returns which was considered a trusted source - both as a credible data source and in terms of what growers were willing to share. However, the project continued to incur delays in receiving this data due the lateness in which many growers receive their completed tax return from their accountants; this delay also impacted participation as well as initial buy-in and momentum was lost waiting for this document to be completed.

Tax returns should be filed by May and therefore most growers would be expected to have these key documents in their possession by March. However, in reality many growers were still to complete this even 3 months later, another indicator that financial data management was not a high priority for many businesses.

Going into Year 3, the project reassessed the sources of information required to successfully participate in the process and decided to request Financial Management Reports that can be efficiently produced from the financial software packages that are used by growers. As part of the data gathering process the growers are asked whether they used an electronic financial management system. Of the participating growers it was found that 80% do indeed use an electronic financial management system which is capable of producing the required management reports.

The project tested the idea of Financial Management System Management Report sharing with a number of early adopter growers, who were more willing to share this information having completed the process and having experienced the value of the process. It should be noted this is standard practice in broadacre with financial information platforms shared regularly from grower to advisor.

While it was found that this decision did speed up the process of participation, there was still some resistance by some new participants to share this very sensitive information straightaway and were happier with sharing tax returns.

Recommendations

Maintaining the momentum of gathering and publishing relevant industry data, particularly longer time horizon rolling averages, to support an industry-wide management change towards data-driven decision making

The hard-fought momentum across the 3 years of this project to deliver the stated outcomes above and play its part in provoking a practise and management change towards more data driven decision making across the vegetable industry needs to be recognised.

This has not been easy and there has been a significant investment of time, effort, resources and funds to bring about these 'green shoots' for a wider industry level change that are evidenced above.

The project has provided much more than mere industry related data that was previously not in existence in any useable or useful format to growers seeking to improve profitability. The project has provided real tangible insights into some of the real challenges and risks that face the industry and a means to address and direct targeted efforts to meet these challenges – particularly when considering financial and business management maturity levels.

It is also worth remembering that the initiative has been shaped on the hugely successful 40+ year similar initiative that has routinely served the Western Australia Broadacre industry so successfully. A key success feature is the rolling 6-, and 10-year averages that provide such a solid foundation for financial and business decision making of farmers and associated stakeholders (e.g. financial institutions) in that industry. Again, note that nothing of this nature existed in the Horticulture industry in any meaningful format that is directly useful to the actual business owners until the 3-year average was analysed this year; however a 3-year average is still short of a 6 or 10-year average and the financial business management rigor that that brings.

It is recognised that it routinely takes 6 to 7 years to install management change across the horticulture industry.

Recommendation: Capitalise on the hard-fought momentum of this project and extend the project to reach a tipping point of management change that will install benchmarking and a more detailed data driven decision making as part of 'business as usual'.

This is not an open-ended recommendation. The end vision being a self-sustaining and self-funded initiative that both growers and key stakeholders see value in and are willing to contribute towards.

The ability to more deeply investigate and produce meaningful data about key issue within the vegetable industry has been proven by this methodology. Looking ahead, there is also an opportunity to review and broaden the lines of enquiry, beyond farm profitability, to gain more detailed industry insights to inform broader risk and opportunity management (e.g. labour and water use as well as natural capital and biosecurity measures).

Support industry collected and owned data to serve the industry

In an environment of increasing value and commercialisation of data and information in a rapidly changing landscape, it would be prudent to support the longer term interests of the industry by maintaining an industry owned and accessible dataset of key information for the improvement of the industry rather than having an outside larger private corporate organisations do this with a view to overly profiteer from the industry.

Furthermore, given the economic impacts of the current Corona virus environment (both known and predicted) on the vegetable industry, now more than ever will there be a requirement to provide key industry and farm level data and information to target recovery efforts and guide the industry through these turbulent times – better this information came from within industry rather than from a larger corporate with differing agendas.

Recommendation: continue to support horticulture industry collected and owned data to serve the horticulture industry.

Addressing the gap in the Base Level of Financial & Business Management across Vegetable Business Owners

As previously detailed above and in multiple previous milestone reports during the course of the project, the base level of understanding around the importance of record keeping and general Financial and Business

Management among vegetable growers was found to be at levels that fell below expected levels of maturity. The project further identified a lack of adaptability within business models, market focus and rigorous process execution among many vegetable businesses.

From a project point of view these issues impacted execution; consuming far more time and effort than originally expected in terms of having to overcome objections regarding data sharing, education of growers of what benchmarking is as well as also educating them on the key performance measures contained within it, which itself was a key indicator of this issue. Selling the concept of opening up to the value of spending at least some regular time working 'on the business' rather all of it 'in the business' by the business owner was a key part of winning meaningful participation by growers.

In an effort to validate the presence of this observed skills and knowledge gap, the project proactively engaged all of the significant Agri-Finance banks and institutions in Western Australia who further verified our observations.

The presence and impact of this identified fundamental issue raises larger concerns for the industry and R&D investment, particularly:

- Accessing finance and reporting of budget to actual cashflow
- Speed of changing practises to meet changing markets and commercial environments
- Uptake of export opportunities
- Uptake of digitisation efforts
- Truly capitalising on R&D Investment

While skills and knowledge of participants have improved, particularly for growers who participated throughout the project life span, there is still some way to go to reach a solid and proactive strategic and operational level of financial and business management maturity as well as a large disparity between those that have engaged with the project and those that didn't.

It has been noted by participating growers (all of whom wanting to continue participating beyond the end of this project) that interaction with the benchmarking process has been more educational in this area than a 'workshop' environment which many growers tend to shy anyway from. Therefore, to many, in particular the vegetablesWA Committee of Management, the presence of this project alone is seen as a significant step towards closing a significant industry skills and capability gap that could well be holding the industry back from its full potential.

Again, given the economic impacts of the current Corona virus environment (both known and predicted) on the vegetable industry, now more than ever will there be a requirement to provide services that are focused on targeting the identified gaps in business and financial management maturity levels among vegetable business owners in order to build resilient and sustainable vegetable businesses that form the vegetable industry both in Western Australia and Australia as a whole. Failure to address this will have significant impacts on the face of the industry over the forthcoming years.

Recommendation: that Hort Innovation further investigates the breadth and depth of the capacity in financial and business management skills across sectors of Horticulture in Australia. That more practical solutions – particularly benchmarking – be pursued for future funding in order to support a profitable and sustainable industry going forward. This could be in the form of promoting financial and business management skills (including the value of benchmarking) as a component of Hort Innovation's Leadership Fund. Building capacity in up and coming leaders in the Horticulture industry acknowledges the importance of these skills in driving towards a profitable and sustainable industry.

Addressing the Gap in relation to Extension guidelines and sharing of best practise

vegetablesWA would like to specifically flag and expand upon a key learning that was identified during the execution of this project and is directly related to the successful deployment of current and future Hort Innovation funded projects.

In principle the key learning relates to the need to focus on 'Marketing and Sales' methodology, tools and techniques to enlist grower engagement and participation.

The level of involvement and participation required by growers, in an area that is particularly sensitive, as well as the ensuing behaviour change that was targeted by the outcomes and outputs of the project should not be

underestimated. Furthermore, this was compounded given the challenge that the project has faced in terms of the general gap in Business and Financial Management levels across the vegetable business owners of WA – as mentioned above.

In order to rise to the challenge and remain focused on meeting the expectations on the project, key project staff have continually explored and tested new and innovative ideas and approaches, beyond the agricultural sector, to successfully engage growers to level of participation. This has also required a nimble and agile approach to refining the associated project execution process to accommodate these approaches and still deliver the benefits and value to growers.

As a result, meeting this challenge has forced a potentially deeper level of contemplation and understanding of the human elements and characteristics of engagement and extension to Horticultural growers in general. It has also required an agile and focused learning mindset as well.

It should be noted that there are no specific guidelines or sharing of best practise to this end provided by Hort Innovation, which could be considered gap and a concern given the large number of projects that have been/are funded by Hort Innovation that could yield a great wealth of insight into this area that could be shared with future investment projects to ensure greater success and impact.

Recommendation: the development of a catalogue of extension and grower engagement best practises that future Hort Innovation funded project can draw upon. vegetablesWA would welcome the opportunity to share and discuss the challenge and learnings of continually improving grower engagement and extension with wider Hort Innovation staff and stakeholders so that these lessons can be documented and form the beginning of such a document that can be shared to increase the potential of value delivery to the Levy Payers themselves.

Intellectual property, commercialisation and confidentiality

The position, in relation to the Intellectual property, remains the same as captured in the IP register which was agreed at the signing of contract.

Acknowledgements

vegetablesWA would like to acknowledge:

- Partners Planfarm for their proactive and understanding approach to delivering this project.
- The vegetable growers of Western Australia, in particular the early adopters of Year 1 upon whom the foundations where laid for the future of this initiative
- Funder Hort Innovation and Department of Primary Industries and Regional Development
- All Agri-finance institutions who have given their support to this initiative
- All supporting staff member within vegetablesWA who have supported the roll out of this project

Appendices

Appendix A - FY 2018-19 Vegetable Industry Benchmark report

Appendix B - 3- Year averages for the Western Australian vegetable industry

WESTERN AUSTRALIA

VEGETABLE INDUSTRY BENCHMARKS

2018–19 FINANCIAL YEAR

Prepared by vegetablesWA and Planfarm Pty Ltd

This project has been part funded by Hort Innovation and the Department of Primary Industries & Regional Development using the vegetable research and development levy and funds from the Australian Government. For more information on the fund and strategic levy investment visit **horticulture.com.au**

vegetablesWA

PLANFARM

Hort Innovation

GOVERNMENT OF WESTERN AUSTRALIA

Department of **Primary Industries and Regional Development**

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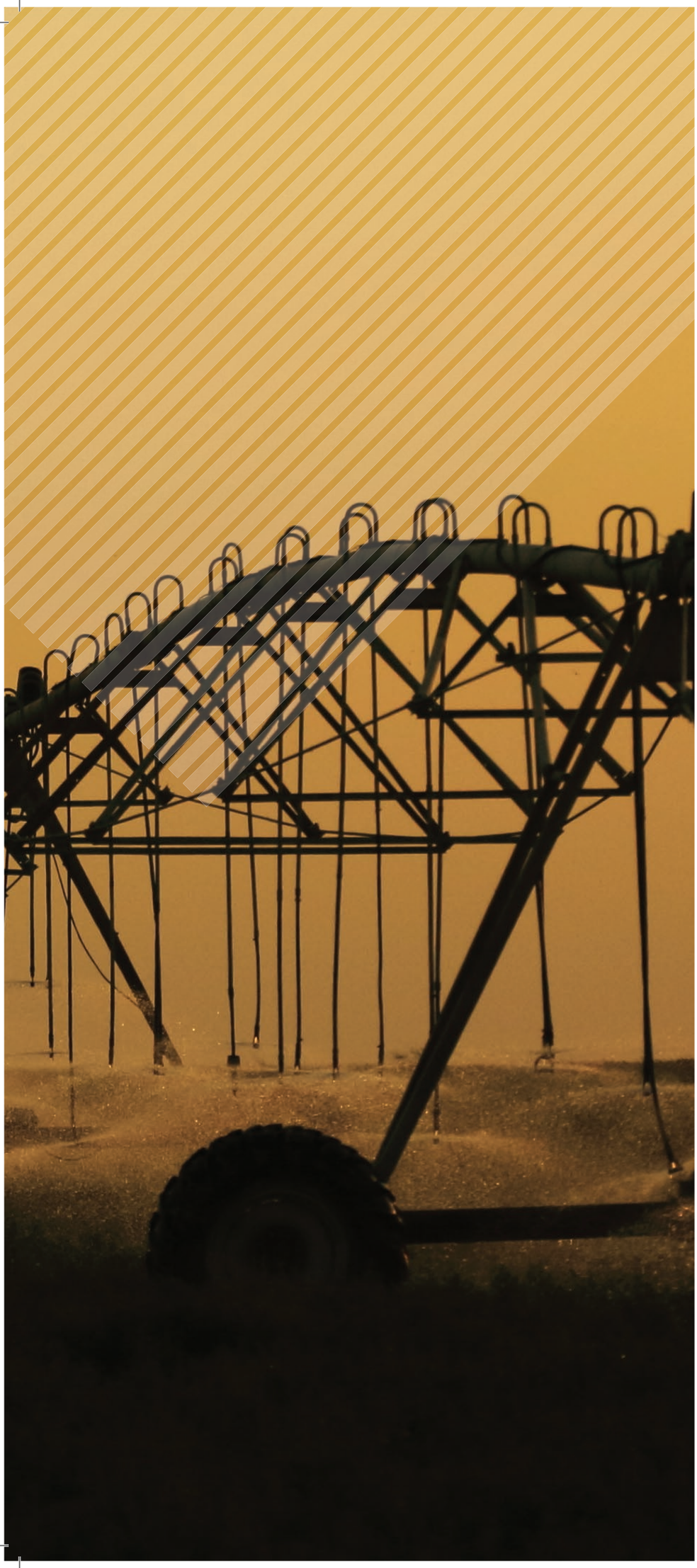


ABOUT THIS RESEARCH

This report is published for the benefit of Western Australian vegetable growers and those involved in the Western Australian vegetable industry. The 2018–19 vegetablesWA & Planfarm benchmarks are derived from a number of businesses located across Western Australia.

The result of this benchmarking initiative is producing an industry report and an individual grower report. The industry report aims to take a snapshot of where the vegetable industry in WA is positioned. While the grower report drills down into the individual growers information. Doing this highlights the strengths and weaknesses of an individual business, whilst comparing productivity and profitability measures back against the average. This project has been able to consistently and effectively provide one-on-one feedback to help drive the individual growers business performance over the short and long term.

For more information about the vegetable benchmarking or any other products offered by vegetablesWA or Planfarm and any questions related to this report, please contact us.

KEY INSIGHTS

The vegetablesWA and Planfarm's *Vegetable Industry Benchmarks 2016–17* was Western Australia's first ever annual report into the financial and production performance of vegetable grower businesses. The 2018–19 is the third edition of the annual report and contains significant insight into the financial performance of Western Australian vegetable growers.

KEY INSIGHTS ARE:

- Generally positive outcomes however there is a wide range of results.
- The most profitable growers (as measured by vegetable operating profit per hectare) were not those from a particular area, of greater scale or a particular vegetable type, but those that were able to achieve a higher income per hectare, through increased saleable yield and a strong focus on marketing their product, while keeping costs as a percentage of income below 65%.
- The most profitable growers were also focused heavily on vegetable production, allocating 90% of their area to growing vegetables.
- The most profitable producers were not necessarily the largest producers in terms of land area utilised.
- The vegetable industry can generate great returns comparable with any other industry or investment type.
- There are easy changes to improve profits for those with lower results.
- The overall industry average numbers have changed as the benchmarking has evolved over three years as it involves more businesses. We have also further refined financial measures to benefit the industry.

PRESENTATION OF FINANCIAL RESULTS

This report is the analysis of the 2018–19 single year financial results.

At the end of this report the 2016–17, 2017–18 and 2018–19 single year results are compared against each other for individual three-year comparisons. We also present the three-year average results based off a consistent client base. This is to build some medium- to long-term benchmarking results of West Australian vegetable growers.

Throughout this report you will see vegetable grower results being presented ranked on the **average**, the **top 25%** and the **bottom 25%**. The average is the average of the whole data set while the bottom 25% and the top 25% results are the average of the bottom 25% and top 25% respectively.

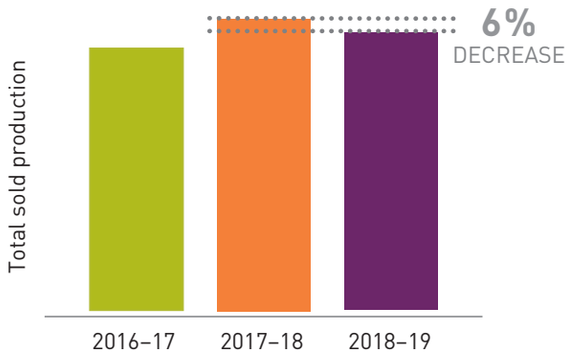
For the 2018–19 benchmarking single year results, the growers were ranked on their vegetable operating profit per hectare. Vegetable operating profit per hectare is calculated by taking vegetable operating costs away from vegetable enterprise income so it ignores other enterprise expenses and income. This allows for growers to be ranked on the profitability of their vegetable enterprise.

Note that for the measures such as the vegetable operating costs percentage, the equity percentage and the return on capital these measures are calculated individually for every client and then averaged. They are not calculated using the average vegetable income/costs or average net equity/assets or average net profit divided by average assets. This is an important distinction to make as they will return different results if calculated off the averages.

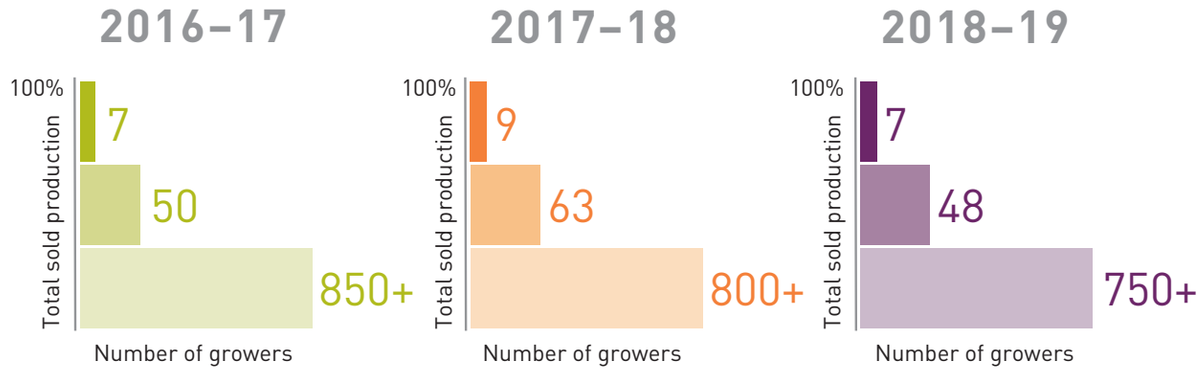
VEGETABLE INDUSTRY INFORMATION

TOTAL SOLD PRODUCTION

There was a 6% decrease in sold vegetable production between 2018–19 and the preceding year of 2017–18.



SPREAD OF VEGETABLE GROWER PRODUCTION IN WESTERN AUSTRALIA

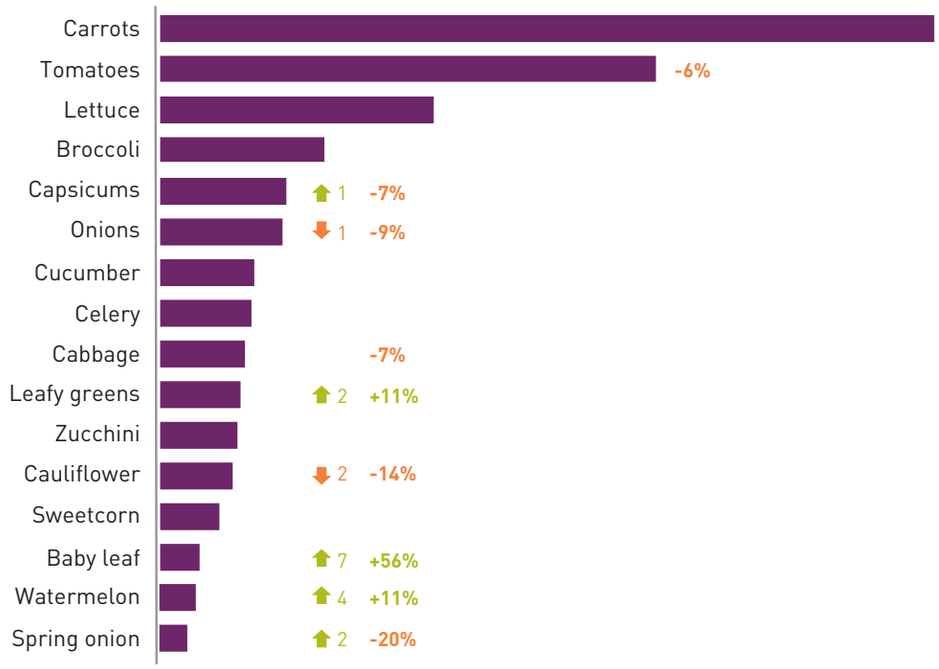


Ranking growers in terms of production in 2018–19:

- The first third of total sold production was produced by the seven largest producers
- The second third of total sold production was produced by next 48 producers
- The last third of total sold production was produced by the remaining 750+ growers
- There was a reduction of 5% of growers from 2017–18

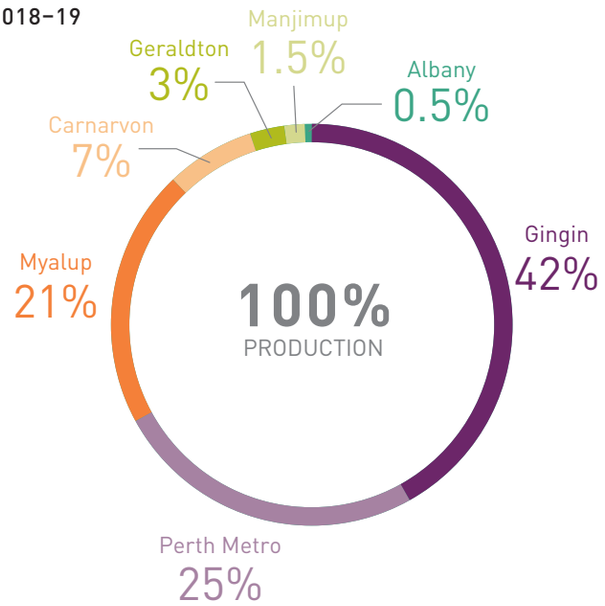
The insights are provided from analysis and assumptions drawn from the Agricultural Produce Commission Vegetable Producers Committee fee for service data

TOP 14 VEGETABLE LINES RANKED BY SOLD PRODUCTION IN 2018–19 — 80% OF TOTAL



Arrows and numbers denotes in a change in rank from 2017–18 to 2018–19

REGIONAL PRODUCTION IN 2018–19

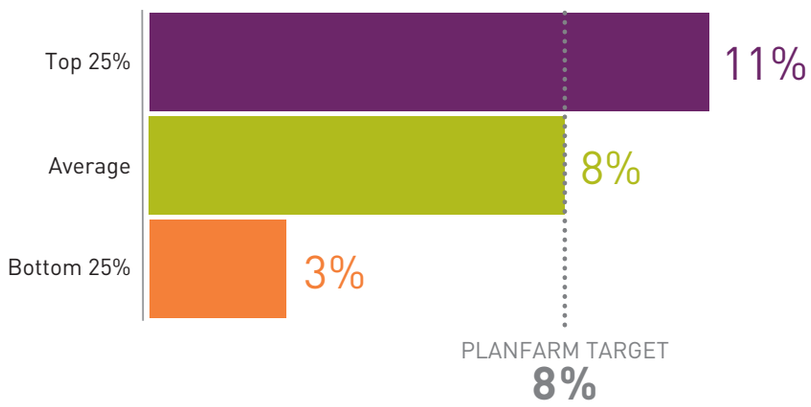


The insights are provided from analysis and assumptions drawn from the Agricultural Produce Commission Vegetable Producers Committee fee for service data

WA VEGETABLE GROWER PERFORMANCE

The 2018–19 financial year provided variable results from participants. The average return on capital was 8%.

2018–19 RETURN ON CAPITAL

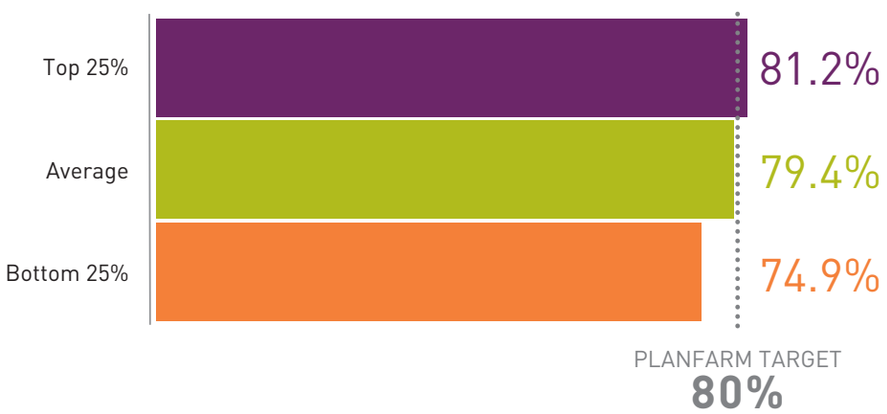


KEY FINDINGS:

- West Australian vegetable growers achieved an average return on capital of 8% in the 2018–19 financial year. The top 25% had a return on capital of 11% while the bottom 25% had a return on capital of 3%. This highlights the varied performance of vegetable growers.
- The average return on capital of 8% is equal to the Planfarm KPI target return on capital. When achieving an average return on capital of 8% over 10 years, a business will double its capital base.
- Its important to understand that the return on capital measure is a whole business measure and therefore other farm enterprises, such as livestock, other cropping or processing facilities will contribute to generating a positive return on capital.
- The return on capital (ROC) is one of the most important financial ratios to consider when examining a grower's performance. ROC is the cash return from the capital at the businesses disposal and does not include any capital gain on land assets.
- The ROC is calculated by taking liquid farm assets away from total assets. Liquid assets, such as cash at bank and produce on hand, can easily be sold or converted into cash and aren't necessarily part of the initial investment made to produce income. Therefore this is a more accurate measure of the return on capital that an investment has made.
- The ROC is an important measure that the grower can use to determine how their business is tracking over time and whether they are making sound business decisions. If a grower can achieve an increased profit each year and increase total farm liquid assets it will improve their ROC.

Vegetable growers in Western Australia in the 2018–19 financial year, have strong balance sheets with an average business equity of 79.4%.

2018–19 EQUITY %



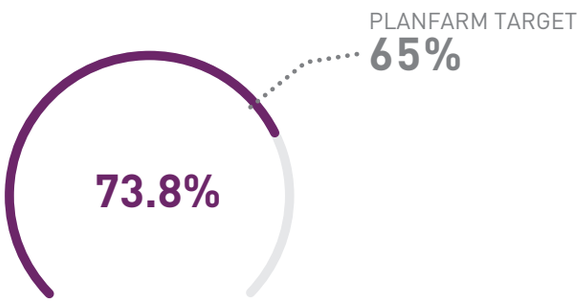
KEY FINDINGS:

- The average equity position for the 2018–19 benchmarks was 79%, with the top 25% being slightly higher at 81% and the bottom 25% being lower at 75%. This equity position for both the average and top 25% is ideal as the target equity percentage is 80%, a KPI set by Planfarm. This is because an equity percentage above 80% can assist businesses to survive shocks such as negative surplus (deficit) caused from production, market influences or pricing catastrophes.
- The graph depicts the equity percentages of the top 25%, the average and the bottom 25%. Equity percentage is a measure of the ownership of total farm assets, it is calculated by dividing total equity by total assets.
- The equity percentage is an important measure that the grower can use to determine their entire business equity ownership. From the results it can be seen that vegetable growers in Western Australia have a stable financial position in terms of business equity percentages.

WA VEGETABLE GROWER PERFORMANCE CONTINUED...

In the 2018–19 financial year, Western Australian vegetable growers had an average operating cost (as a percentage of vegetable income) of 74%.

AVERAGE OPERATING COST %



KEY FINDINGS:

- In the 2018–19 financial year the average Western Australian vegetable grower was able to keep vegetable operating costs to 74% of vegetable income, which resulted in an average operating profit per hectare of $18,127.
- The vegetable operating cost percentage is a measure of the percentage of the vegetable income that is allocated to covering the seasons vegetable operating costs. Operating costs include the major cost items such as wages, cost of sales and also overhead costs. The target for this metric is less than 65%.
- The operating cost percentage is an important measure that the grower can use to determine how they turn operating costs into income. The way a grower can increase profitability of their business is to either reduce the operating costs while maintaining the same income or increase income with the same costs or a combination of both.

KEY POINTS:

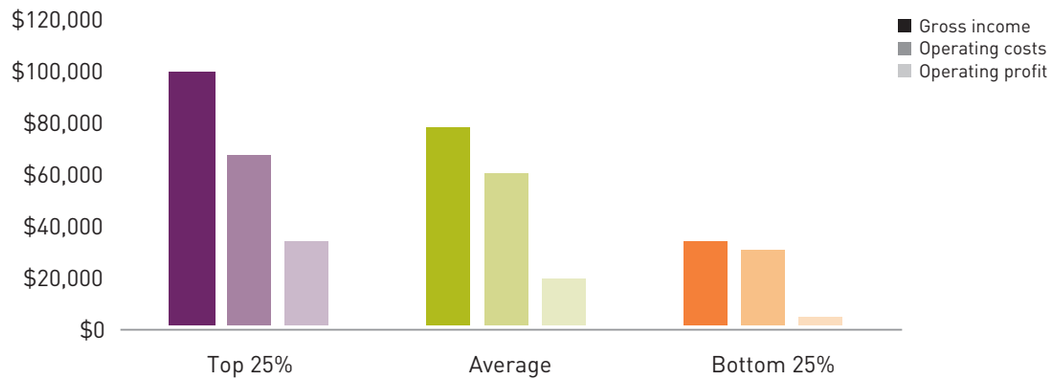
Top 25% growers have an **operating efficiency of 60%**, providing 40% for depreciation, finance/lease costs, drawings, capital (or debt repayment) and importantly profit.

The top 25% had an **operating profit per hectare of $32,281**! Almost double the industry average.

With an **average vegetable income of $77,035/ha**, a reduction of just 5% in operating costs (74% to 69%) would increase operating profit by $3,852/ha. This represents a 21% increase in operating profit of the average industry results. A small positive change in operating efficiency can have a significant improvement in operating profit.

The 2018–19 financial year showed differences between the top 25%, the average and the bottom 25% of growers in terms of the vegetable income, costs and profit.

2018–19 VEGETABLE INCOME, COSTS AND PROFIT



KEY FINDINGS:

- The results of the 2018–19 financial year show a clear trend in the vegetable income per hectare between the three groups, with the top 25% of growers producing $20,000/ha more income compared to the average grower, and the average grower producing $30,000/ha more income compared to a grower in the bottom 25%.

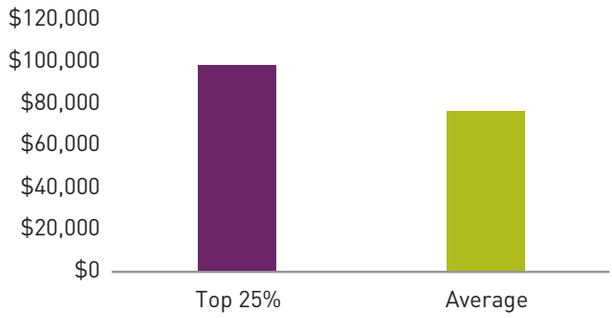
KEY POINT:

The top 25% growers appear to have **more risk by spending more on operating costs per hectare**, but also have more reward with a **much larger revenue per hectare** which then drives operating profit.

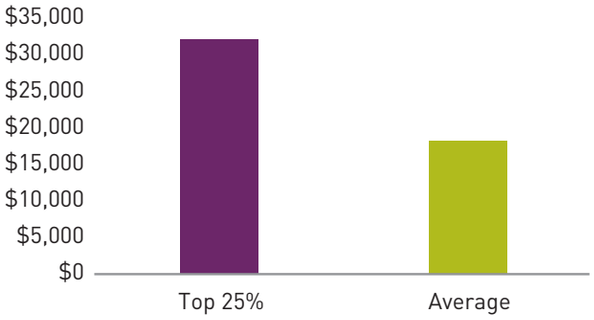
TOP 25% GROWERS IN 2018–19

All growers were ranked on the vegetable operating profit per hectare.

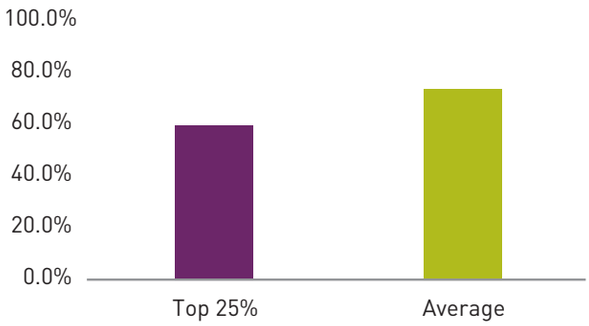
VEGETABLE GROSS INCOME $/HA



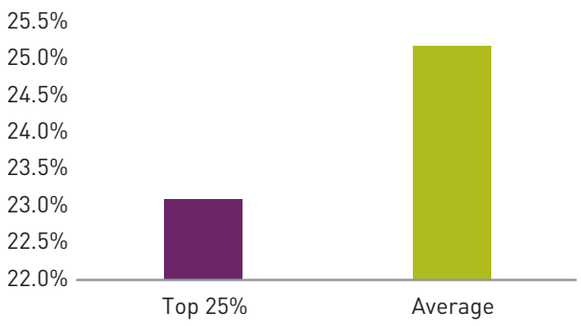
OPERATING PROFIT $/HA



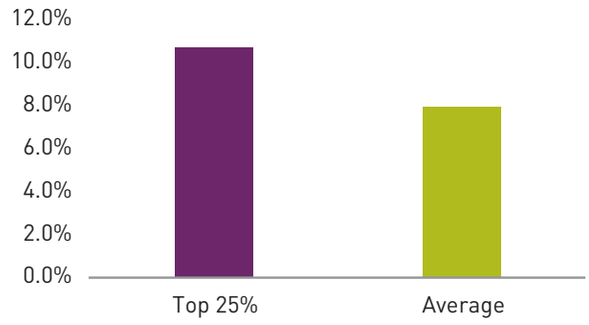
OPERATING EFFECIENCY



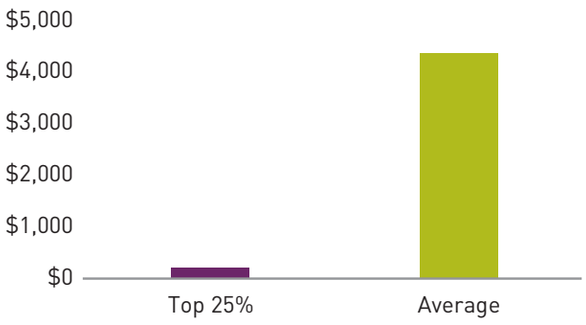
VEGETABLES WAGES COST % OF VEGETABLE INCOME



RETURN ON CAPITAL



OTHER FARM ENTERPRISE PROFIT $/HA



KEY FINANCIAL MARKERS OF THE TOP 25% OF GROWERS WERE:

- The top 25% of growers managed to produce more vegetable income off the same area as the average grower.
- They had the lowest 'other farm enterprise' profit per hectare when compared to the average and bottom 25% of growers, suggesting that the top 25% of growers are focussed solely on maximising the profitability of their vegetables.
- The top 25% of growers were the most efficient at utilising their labour inputs, which is the single largest cost for all vegetable growing enterprises.

14%

LOWER OPERATING COST PERCENTAGE THAN THE AVERAGE GROWER

3%

HIGHER RETURN ON CAPITAL THAN THE AVERAGE GROWER

$32,281

VEGETABLE OPERATING PROFIT PER HECTARE

The 2018–19 top growers didn't all grow the same vegetable, they weren't all from the same area and they didn't all value add!

1 Income per hectare

The top 25% of growers grew **11 different types of vegetables** between them. The type of vegetable grown didn't make the grower a top 25% grower, but rather maximising the income per hectare while keeping the vegetable costs as a percentage of vegetable income under 65% provided greater returns. When examining your own business, improving your income per hectare can be done by either increasing your saleable yield per hectare or getting more money for your product. If increasing income isn't going to be an option, then comparing your operating costs against others by benchmarking can give insight into where you might be overspending in your business operations.

2 Location

The vegetable benchmarking project covered the top five of the six vegetable growing regions in Western Australia (**Gingin**, **Perth Metro**, **Myalup**, **Carnarvon**, **Geraldton** and **Manjimup**). The top 25% of growers were spread all throughout these areas and therefore the climate didn't affect the vegetable operating profit of the businesses but rather the growers ability to grow the right vegetable in the right region.

3 Value added produce

Growers who value added produce were scattered throughout the vegetable benchmarking. More importantly the way the data is collected, any value added and costs associated with processing are taken out of the vegetable operating profit (included in 'other farm enterprise') so that we can compare vegetable growers at a farm gate level.

SINGLE YEAR RESULTS COMPARED FROM 2016–17 TO 2018–19

The vegetable benchmarking results in the following graphs compare the 2016–17, 2017–18 and 2018–19 results. Note that the 2017–18 results have been updated from the previous year. It is important to remember that these aren't three years of results from the exact same group of growers, however the same calculations were used.

Although the average equity percentage and the operating profit per hectare for the businesses involved varied from year to year the operating efficiency and return on capital for the vegetable growing business seemed to be quite consistent, with an operating efficiency around 75% and a return on capital between 7.5–8.5%.

The reason that the other two measures differ a lot would be due to the movement of vegetable growers into the benchmarking. As the benchmarking has evolved and more clients have started to be involved in the benchmarking it has shifted the industry averages for these measures.

OPERATING COST (%)

OPERATING PROFIT/HA

RETURN ON CAPITAL (%)

EQUITY (%)

2016–17 2017–18 2018–19

BUILDING A LONG TERM PICTURE OF VEGETABLE GROWERS ACROSS WESTERN AUSTRALIA

The vegetable benchmarking project over the past three years has helped vegetable growers and industry professionals build a greater understanding of average West Australian vegetable growing businesses, the financial results and drivers of these businesses.

Over the past three years the benchmarking project has been releasing single year data every year, talking about the results on a single year basis and comparing back to the previous year.

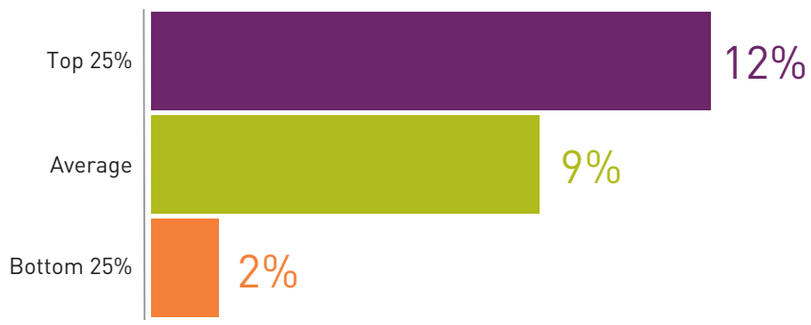
The ideal is to build benchmarking data over a number of years in order to create a rigorous understanding of an industries performance through time. In this next section three-year medium term benchmarking data will be presented. This three-year data consists of the growers that have been involved in the benchmarking every year for the past three-years.

In the three year average analysis the growers are ranked based off their three-year average vegetable operating profit per hectare in order to maintain a consistent ranking system with the single year results.

The ideal is to build benchmarking data over a number of years in order to create a rigorous understanding of an industries performance through time.

THREE-YEAR AVERAGE RETURN ON CAPITAL

THREE-YEAR AVERAGE RETURN ON CAPITAL



KEY FINDINGS:

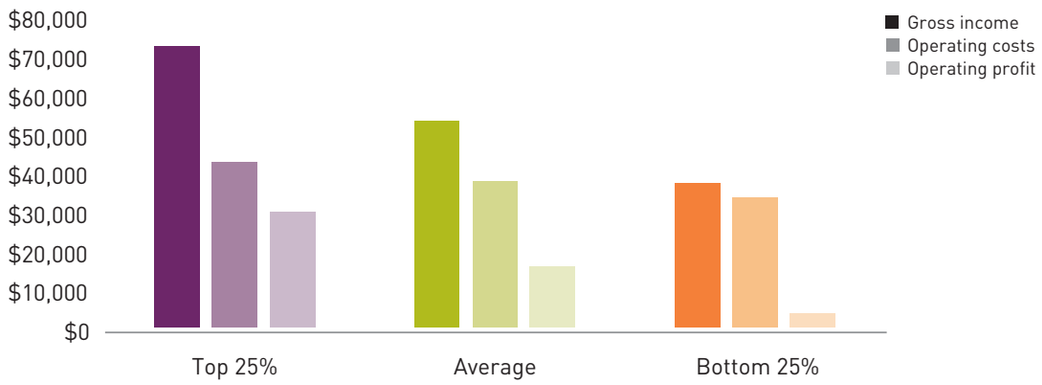
- West Australian vegetable growers achieved an average return on capital of 9% per annum over the three years from 2016–17 to 2018–19 not including asset value appreciation.
- The top 25% of growers over the past three years were able to produce a higher return on capital of 12%.
- The three year average results, much like the single year results, showed a wide gap between the top and bottom 25% of performers, with the latter returning only 2%.

KEY POINT:

A cash return of **9% per annum** is highly competitive when compared to other asset investment classes.

THREE-YEAR AVERAGE VEGETABLE INCOME, OPERATING EXPENSES AND OPERATING PROFIT PER HECTARE

THREE-YEAR AVERAGE VEGETABLE INCOME



KEY FINDINGS:

- Over the three-year period the top 25% of growers produced more vegetable income on a per hectare basis compared to the average, while the average grower produced more vegetable income on a per hectare basis than the bottom 25% of growers.
- Interestingly, the vegetable operating costs for the businesses over the three year period were similar, with a $4,997/ha difference between the top 25% and average and a $4,082/ha difference between the average and the bottom 25%. The top 25% spend the most on the operating costs per hectare and the bottom 25% spend the least.
- What sets the top 25% of growers apart from the rest of the cohort is their ability to produce more income from the same area and relatively similar operating costs.

KEY POINT:

The top 25% of producers spent **13% more on operating costs** when compared to the average but produced **35% more income**.

THREE-YEAR AVERAGE VEGETABLE OPERATING EFFICIENCY

OPERATING EFFICIENCY %

KEY FINDINGS:

- The three year operating efficiency highlights the ability of the top 25% of producers to achieve a lower operating efficiency by maximising the income that they produce from the same amount of costs when compared to the rest of the cohort.
- Over a three year period the average operating efficiency was 72% while the top 25% of producers had an operating efficiency of 59%.
- This suggests that vegetable growing businesses appear to operate at a higher operating efficiency (i.e. spending 72 cents to make 1 dollar). This only leaves 28 cents to pay for personal drawings, finance, tax, capital and profit! In effect, the top 25% have an additional 13 cents in every 1 dollar of income at their disposal compared to the average.

VEGETABLE BENCHMARKING SUCCESS STORIES 2017–20

Participation in the vegetable business benchmarking process has delivered numerous significant positive impacts to vegetable business owners.

These have included:

- Strategic business restructuring — strategic targets have included future business sale, improved quality of life, more focused marketing
- Clarity of succession planning and improved family business stability
- Lowering overheads
- Reducing operating costs
- Targeted profit focused production programming
- Deeper scrutiny of yield and labour efficiency
- Informed investor value proposition modelling
- Improved water efficiency

For more detailed Benchmarking Success Stories please visit:
www.vegetableswa.com.au/benchmarking

GLOSSARY

EQUITY PERCENTAGE

This is the dollar equity figure divided by the total assets expressed as a percentage.

LIQUID ASSETS

Defined as assets that are easily transferred into cash. These are defined as cash at bank, accounts receivable, tolls, credits, seed, produce and stores in this report.

OPERATING EXPENSES

Relates to any payments made by the farm business for materials and services, excluding capital (depreciation), finance, and personal expenditure.

OPERATING PROFIT

This is the gross farm income minus the operating expenses.

VEGETABLE INCOME

This is all of the income which is generated from the vegetable enterprise of the business, this is the sales of produce, crate rebates and diesel rebates.

VEGETABLE OPERATING PROFIT

This is the vegetable income minus the vegetable operating expense.

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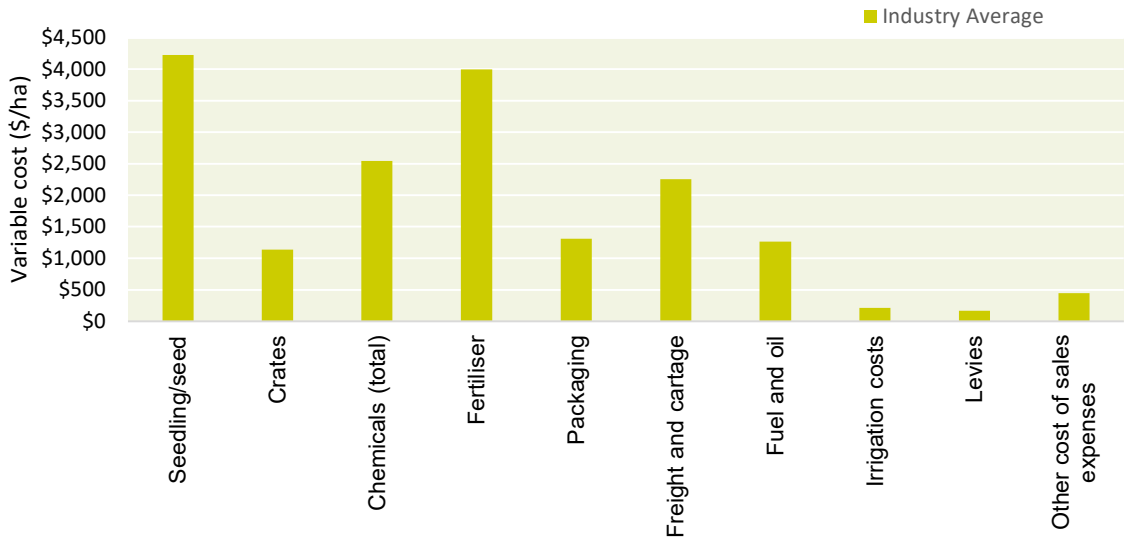
PLANFARM

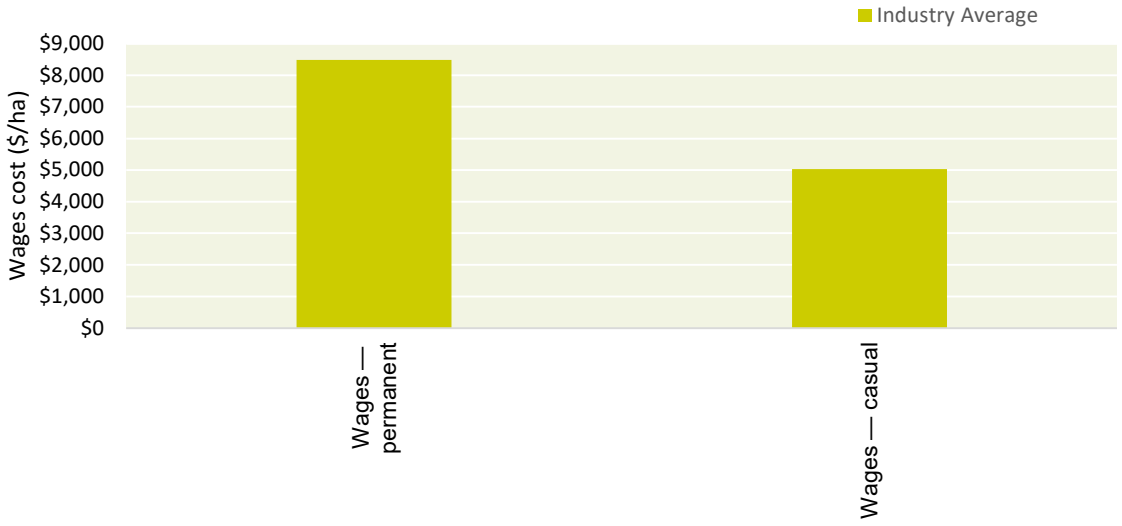
Hort Innovation

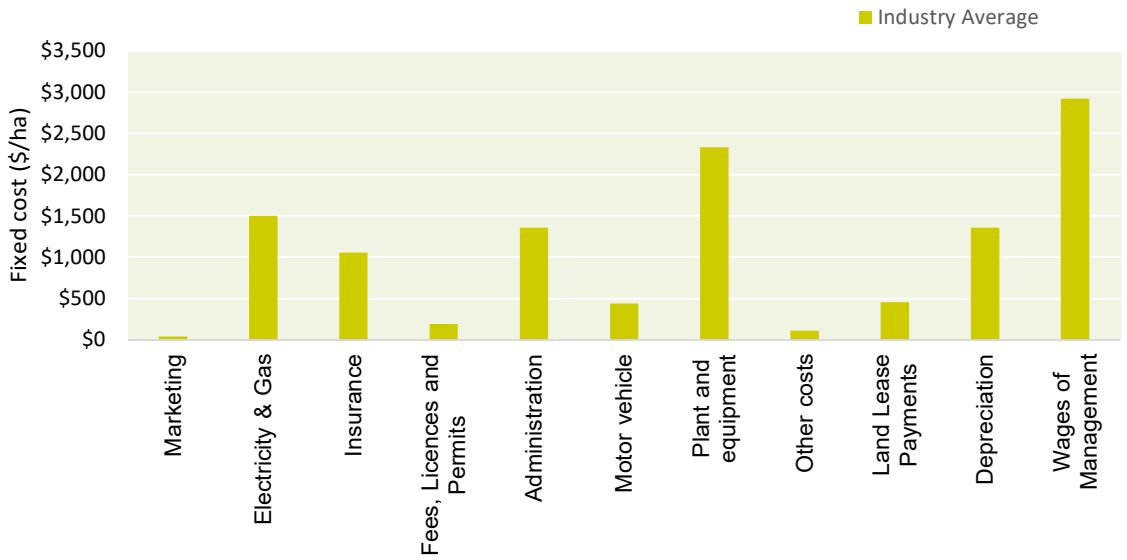
Department of Primary Industries and Regional Development

GOVERNMENT OF WESTERN AUSTRALIA

VEGETABLE PRODUCTION EXPENSES PER HECTARE







VEGETABLE PROFIT AND LOSS

Vegetable Profit/Loss	Your $/ha	% of Inc	% of op costs	Dif**	Ave	% of Inc	% of op costs	Top 25%	% of Inc	% of op costs
Vegetable Income										
Vegetable revenue				➡	$54,073			$73,214		
Other income										
Diesel rebates				⬆	$302			$272		
Total Vegetable Income				➡	$54,374			$73,487		
Vegetable Expenses										
Vegetable Operating expenses										
Variable Expenses										
Seedling/seed				⬆	$4,230	8%	12%	$5,369	9%	16%
Crates				➡	$1,140	4%	5%	$1,197	1%	2%
Chemicals (total)				➡	$2,546	4%	6%	$2,132	3%	7%
Fertiliser				⬆	$3,999	8%	11%	$3,632	5%	9%
Packaging				➡	$1,313	2%	3%	$1,987	2%	3%
Freight and cartage				⬇	$2,257	4%	6%	$3,456	5%	9%
Fuel and oil				➡	$1,267	3%	4%	$1,403	2%	4%
Irrigation costs				➡	$218	0%	0%	$198	0%	0%
Levies				⬇	$170	0%	1%	$128	0%	0%
Other cost of sales expenses				⬇	$448	1%	2%	$164	0%	1%
Wages (total)										
Wages — permanent				⬆	$8,491	15%	18%	$8,476	9%	13%
Wages — casual				⬇	$5,047	8%	12%	$8,287	11%	19%
Farm Overhead Expenses										
Marketing				➡	$43	0%	0%	$39	0%	0%
Electricity & Gas				⬆	$1,506	3%	4%	$1,134	2%	3%
Insurance				⬆	$1,060	2%	3%	$1,024	1%	2%
Fees, Licences and Permits				⬇	$192	0%	0%	$118	0%	0%
Administration				⬆	$1,361	3%	4%	$1,686	3%	5%
Motor vehicle				⬇	$440	1%	1%	$806	1%	2%
Plant and equipment				➡	$2,333	5%	7%	$1,738	3%	4%
Other costs				⬇	$115	0%	0%	$194	0%	0%
Total Vegetable operating expense				⬆	$38,173			$43,170		
Vegetable Operating Surplus				⬇	$16,201			$30,317		
Operating Efficiency %				⬆	71.5%			58.6%		

* The above vegetable profit and loss per hectare values refer to the hectares used to grow vegetables.

** The operating cost % presented is an average of each farm, therefore it will differ slightly from the manual calculation of the average of each operating Cost.

*** This is the same for your operating efficiency, costs as a percentage of income and costs as a percentage of costs as they are the average of your results over the past three years and will differ from the manual calculation using the averages.

**** The arrows with the numbers next to it represent the difference from the average and top 25% in terms of the standard deviation for the measure on a per hectare basis.

⬆	25% above the Industry Average
➡	Less than 25% above or below the Industry Average
⬇	25% below the Industry Average

WHOLE BUSINESS PROFIT AND LOSS

Whole Business Profit/Loss	Your $/ha	Dif**	Ave	Top 25%
Vegetable Operating Surplus		⬇	$10,613	$20,587
Net other Farm Enterprise		⬆	$1,611	$486
Farm Operating Surplus/Loss (EBITDA)		⬇	$12,224	$21,073
Land Lease Payments		⬆	$458	$410
Depreciation		⬆	$1,361	$1,306
Wages of Management		⬆	$2,922	$4,130
Net Profit		⬇	$7,484	$15,226
Return on Capital		⬇	8.5%	12.2%
Finance costs		⬆	$1,276	$671
Profit Before Tax		⬇	$6,208	$14,556

* The above Whole business profit and loss per hectare values refer to the whole businesses arable area.

** The arrows with the numbers next to it represent the difference from the average and top 25% in terms of the standard deviation for the measure on a per hectare basis.

⬆	25% above the Industry Average
➡	Less than 25% above or below the Industry Average
⬇	25% below the Industry Average

WHOLE BUSINESS RATIOS

Financial ratios	Your result	Dif**	Ave	Top 25%
Return on capital		⬇	8.5%	12.2%
Operating Efficiency %		⬆	71.5%	58.6%
Machinery cost % (depreciation)		➡	3.8%	2.6%
Finance & lease cost %		⬆	3.7%	1.7%
Total wages as a % of farm income		⬆	23.1%	20.3%
Income per FTE		➡	$206,180	$184,683

**The arrows with the numbers next to it represent the difference from the average and top 25% in terms of the standard deviation for the measure on a per hectare basis.

⬆	25% above the Industry Average
➡	Less than 25% above or below the Industry Average
⬇	25% below the Industry Average

PRODUCTION RESULTS

PRODUCTIVITY RATIOS	Your kg/ha	Your kg/Kl

* Note that the your Kg/Kl values presented above are only taken from 2 years of data.

** Note that if you have only provided two or one years worth of production data then the average yields presented above would only be for this period of time.