

Australian Vegetable Industry Strategic Investment Plan

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AUSVEG Ltd

Project Number: VG10115

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Australian Vegetable Industry's Strategic Investment Plan

Final Report: Milestone 190



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AUSVEG



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Project Purpose:

AUSVEG in collaboration with HAL seek to develop a Strategic Investment Plan (SIP) for the Australian vegetable industry. The SIP will guide the investment of growers' R&D levies to maximise vegetable grower outcomes. The SIP establishes an aspirational 10 year vision for the industry providing a foundation for future investment and a baseline measure of performance against which the future industry performance can be compared.

CIS has proposed an accompanying implementation framework which outlines the key next steps and supporting organisational arrangements which need to be taken to execute the SIP. This will be refined and delivered by AUSVEG in partnership with HAL.

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Summary

The SIP will be used to guide the investment of grower's R&D levies. The SIP establishes an aspirational 10 year vision for the industry and details how levy funds can be most effectively used to realise this vision. It also establishes a baseline measure of performance against which the industry's future performance can be compared.

An accompanying implementation framework will outline the key next steps and supporting organisational arrangements which need to be undertaken to execute the SIP.

The development of the SIP has been highly consultative with all key stakeholder groups included in the development of the SIP. Over 300 people directly contributed to the SIP over a 20 month period. Progress of the SIP has been endorsed by AUSVEG, HAL, the IAC, the SIP Steering Committee and the HAL Board. The development of the SIP used the following 8 key interconnecting components:

1. **Planning** – Included scope refinement, scheduling interviews, interview questions, literature review and kick off meetings with key stakeholders.
2. **Direction setting** – Involved understanding the challenges of the vegetable industry and how the R&D levy can be used to address these challenges.
3. **Investigation** – Involved more detailed analysis of key issues
4. **Strategy development** – Involved identifying priority solutions, assessing the risk of these solutions and modelling the economic impacts of these solutions to ensure R&D investment maximises the returns for industry.
5. **National consultation** – Was an additional activity used to test SIP drafts, and predominantly gained levy payers' support for the proposed restructuring of levy fee expenditure.
6. **White paper release** – A working document of findings, recommendations and justification for these recommendations was made publically available for comment.
7. **White paper feedback** – Feedback from 20 respondents with over 116 specific requests for change were incorporated into the SIP.
8. **Final Strategic Plan** – The final Strategic Investment Plan has been delivered and approved by the IAC, AUSVEG Board and HAL Board.

The SIP takes into account the disparate industry needs given the large number of leviable vegetables (over 100), the disperse geographic regions, cultural backgrounds, size and sophistications of operations and organisational arrangements.

The SIP will see the allocation of levy funds directed towards the following three priority areas:

- **Consumer alignment** - This priority area has the objective of increasing the demand for vegetables through either increased price or consumption. 45% of levy funds have been allocated to this strategic priority area.
- **Market & value chain development** - This priority area relates to the development of value adding processes, access to vegetable markets and competing successfully



against imports and in export markets. 20% of the levy funds will be allocated to this strategic priority area.

- **Farm productivity, resource use and management priority** - This priority area will develop techniques and technologies to improve on farm production efficiencies and defend against threats of rising input costs, climate change and emerging pests and diseases. 35% of levy funds will be directed to this strategic priority area.

A balanced set of key performance measures will be used to track the health of the vegetable industry and impact the restructuring of levy funds has on the industry's performance. The overarching measure of the SIP's success will be an increase in the profitability of the industry. A detailed implementation plan will be used to guide the implementation of the SIP.

Introduction

The vegetable levy is a compulsory levy payable on fresh and processed vegetables produced in Australia. The levy is 0.5% of the Gross Sale Value and is matched by the Australian Government. The levy is to be invested in research and development to further the success of the industry.

In 2006 the Australian vegetable industry undertook a strategic planning process which culminated in the development of the VegVision 2020 Strategic Plan. The aim of that plan was to use the R&D levy to help the industry achieve its vision “to double the 2006 value of fresh, processed and packaged vegetables in real terms by stimulating and meeting consumer preferences for Australian products in domestic and global markets”.

AUSVEG, in partnership with HAL, sought an updated SIP to ensure that R&D expenditure reflects the current and future needs of the industry. The industry is required to provide a SIP to the Department of Agriculture, Fisheries, and Forestry (DAFF) to represent the strategic direction of the industry in order to guide the Vegetable Industry Advisory Committee (IAC) in making levy investment decisions. The SIP sets out a realisable 10 year vision for the vegetable industry and incorporates investment priorities for the vegetable industry.

An extensive literature review has been undertaken drawing on the large body of analysis and reports into the vegetable industry. Key reports included:

- ACCC inquiry into the Competitiveness of Retail Prices for Standard Groceries;
- Productivity Commission draft Report into Rural Research and Development Corporations;
- VegVision 2020;
- Other horticultural industry strategic plans, particularly those that have completed economic impact modelling through The Centre for International Economics (CIE);
- Program evaluation for Processed Potatoes & Industry Projects Return on Investment Evaluation Program – BCA;
- ABARE report on the international competitiveness of Australian vegetables, 2006;
- National Horticultural Research Framework;
- Australian Almonds Industry Strategic Plan;
- ABARE research report; and
- Taking Stock and Setting Directions report;

The key findings of this literature review are presented in Appendix 1- Key Themes from Literature Review.

Method and activities

Project management

CIS conducted the development of the SIP, drawing on a team of seven people; however, approximately 80% of the project was completed by three consultants, Greg Spinks, Chad Bystedt and Leanne Edwards. CIS is the major provider of consulting services to the research and higher education sectors and through this work is familiar with strategic planning to guide the allocation of research funding to maximise impact and regularly draws upon economic impact modelling to quantify likely benefits of R&D investment. The project was overseen by the Managing Director of CIS, Greg Spinks. AUSVEG provided the project management and secretariat support for the project. CIS reported to AUSVEG; however, the project was overseen by a SIP Steering Committee specifically convened for the development of the SIP. In addition to the SIP Steering Committee, CIS reported to the Vegetable IAC, the HAL Board of Directors and the AUSVEG Board of Directors. As part of the overall project management approach was the development of a project contract which outlined milestones and was supported by payments based on the compliance with milestones and completion of activities in accordance with the project proposal unless varied by the above mentioned stakeholders.

Approach and activities

The development of a SIP for the Australian vegetable industry has had eight interconnecting components. The full methodology and timing to complete each of these components as outlined in our contract are outlined below. Note that activity 5 (National Consultation) was an additional phase, subsequently added to the engagement.

Activity	Feb, 11	Mar, 11	Apr, 11	May,	Jun, 11	Jul, 11	Aug, 11	Sep, 11	Oct, 11	Nov, 11	Dec, 11	Jan, 12	Feb, 12	Mar, 12
1. Planning phase	■	■												
2. Direction setting		★	★	★										
3. Investigation				■	■	■	■							
4. Strategy development														
a. Straw man SIP			★		■	■	■							
b. Impact modelling					■	■	■							
c. Gap filling							■	■	■	■				
5. National consultation								■	■	★				
6. White paper development & release									■	■	■	■	★	
7. White paper feedback											■	■	■	■
8. Final report													★	■

Details of the activities undertaken under each phases are detailed below.

Planning

The first activity was to prepare for and ensure that this engagement was well organised. Good up front planning was intended to ensure that we minimise disruptions to those involved, maximised our own productivity and provide a level of confidence in stakeholders that the project will be completed in a timely, organised and professional manner. Planning activities included:

- Meetings with the SIP Steering Committee overseeing the SIP process to ensure that there was a common understanding and agreement on the activities to be completed, outputs to be delivered, reporting, timing and communication expectations;

- Working with AUSVEG to collect the names and contact details of people to be involved in this activity, where these people will be most valuable and how they will be engaged (i.e. focus group discussion, interview or telephone call);
- In collaboration with HAL and the SIP Steering Committee, confirming communication and reporting requirements;
- Communicating with the CIE about their role and timing in this engagement.

CIS had identified seven publications as the basis of the literature reviews. Upon commencing this work we found a larger body of relevant reports that informed our thinking. Our literature review included:

- ACCC inquiry into the Competitiveness of Retail Prices for Standard Groceries;
- Productivity Commission draft Report into Rural Research and Development Corporations;
- VegVision 2020;
- Other horticultural industry strategic plans, particularly those that have completed economic impact modelling through CIE;
- Program evaluation for Processed Potatoes & Industry Projects Return on Investment Evaluation Program – BCA;
- ABARE report on the international competitiveness of Australian vegetables, 2006;
- National Horticultural Research Framework;
- Australian Almonds Industry Strategic Plan;
- ABARE research report; and
- Taking Stock and Setting Directions report.

Appendix 1: Key themes from literature review, summarises the key themes from this literature review and was developed as a CIS internal document.

Understand the vegetable industry's current situation by:

- Reviewing background information which demonstrates the performance of the Australian vegetable industry;
- Reviewing background information which demonstrates international trends in the vegetable industry;
- Understanding the impact research and development, promotional and market development strategies have had on the industry;
- Identifying and reviewing relevant information that provide a typical breakdown of the vegetable industry value chain;
- Understanding industry initiatives and what the outcomes of these initiatives have been;

- Completing desk based research in relation to each of the key industry stakeholders, their roles and influence. Note that this process will map and quantify the typical value adding activities to vegetables from the farm gate to retailer;
- Reviewing and further developing the CIS work plan for this engagement;
- Communicating this work plan to involved participants and other stakeholders; and
- Organising related travel and meeting arrangements.

Although the planning phase is predominantly an internal process, CIS reported to the SIP Steering Committee in early March to share our progress.

Outputs from this process include the development of a database of key industry stakeholders to engage and how this engagement will occur (i.e., face-to-face, focus groups, or telephonically), a revised work plan to guide this engagement, the organisation of related immediate travel arrangements, the development of questions that can be sorted by respondent.

Direction Setting

Once planning activities were completed CIS met with 'thought leaders'. CIS were also able to participate in levy payer meetings that were organised in key growing regions within each state, with the exception of NSW. In addition to the engagement of 'thought leaders' CIS also met with:

- Growers;
- The SIP Steering Committee;
- HAL and AUSVEG staff;
- Personnel from State and Federal government departments and associations;
- Suppliers along the supply chain;
- State vegetable associations; and
- Academics.

The purpose of engaging with these stakeholders was to:

- Begin to develop a realistic vision of what the vegetable industry should aspire to become over the next three to five years;
- Look to develop key themes in relation to the challenges and opportunities facing the vegetable industry;
- Understand their view of the role and best use of the vegetable R&D levy;
- Identify possible approaches to addressing these challenges and realising these opportunities; and
- Look at the risks associated with these approaches.



This phase became an intensive five-week work program of predominantly face-to-face interviews and focus group discussions as well as leading components of the levy payers meeting. It involved a small team of four people over this period.

At the conclusion of this phase CIS met with the SIP Steering Committee, the IAC, Working and Advisory Groups and provided three presentations at the National Convention to selected stakeholder groups of the key issues, progress of the SIP, and next steps of the project. This feedback was used to guide subsequent phases of the SIP, to share and test preliminary findings, and to confirm the revised forward plan. This included the arrangements for the grower survey and an explanation of the economic impact modelling and how this was to be completed.

At this point of the project, all parties had the opportunity to cease the project if any party was not satisfied with the direction or progress of the activities to date.

To date, CIS has interacted with over 300 stakeholders; including industry group members, growers, analysts, buyers, researchers, and government representatives. Table 1 provides a breakdown of participants by stakeholder grouping. The acknowledgement section (page 22) provides a complete list of participants interviewed or attending focus group discussions - by stakeholder group and position.



Investigation

Once CIS had a strong understanding of the landscape of the industry and its key issues, a broader and more comprehensive investigation phase took place to validate and investigate, in more detail, the key issues raised from the Direction Setting phase. This phase included more detailed desk-based research and data analysis as well as significant on-site time; which, included a combination of one-on-one face-to-face interviews, focus groups discussions where growers within regions were invited to attend SIP meetings, as well as a series of personal visits to growers' and suppliers' operations. Although, these consultations surpassed the point of diminishing returns as it relates to inputs into the strategic plan, broad consultation not only improved the quality of this work but ensured that key stakeholders were engaged and predisposed to support the outcomes of the SIP.

In addition to engaging with growers from key growing regions, CIS also used this time to meet with other key stakeholders, such as relevant State and Federal Government agencies, HAL, IAC Members and State Grower organisations, suppliers, retailers and other key industry players.

This time was also used to collect key inputs to be used as part of the economic impact modelling completed by CIE.

The SIP Steering Committee was updated both during and at the conclusion of this phase.

This stage of the process will also provide the SIP Steering Committee with a decision point regarding whether to continue with the project or not and to influence its future focus and direction.

It was estimated that this phase of the project would take approximately 8 weeks and 39 professional days; which includes 3 to 4 people meeting with key stakeholders over an intensive three week period.

Strategy Development

From these investigations CIS formed a number of observations and opinions around how the priorities for the industry and how R&D investment can be best leveraged and used to address challenges and opportunities. CIS used this phase to test and further develop these solutions. This included working with CIE to quantify, on a risk adjusted basis, the impact these solutions will have on the industry through the use of the CIE horticulture model. The impact modelling of these solutions was important in guiding the strategic direction of the industry and to help ensure that future R&D investment is targeted towards the largest returns for the industry.

At the conclusion of this phase CIS presented the draft findings of this work to the SIP Steering Committee. This included the delivery of a preliminary document that encompassed a broad strategy for the vegetable industry as well as a specific Strategic R&D Investment component



that will be used to guide where the greatest returns are available from the growers R&D levy.

National Consultation

As the SIP investigation process proposed a significant restructuring of the investment of levy funds the IAC requested that there be an additional National Consultation phase added to the SIP methodology. This phase was to test levy payers sentiments for the key findings, implications and outcomes of the SIP. This involved presentations at levy payer meetings in all states, focus groups with large growers as well as a teleconference for vegetable growers who could not attend levy payer meetings. As part of this consultation participants completed a survey providing formal and unidentified feedback to AUSVEG regarding the SIP process and key recommendations. 104 levy payers and 26 industry stakeholders attended these forums. In summary, there was overwhelming support for the SIP from large vegetable growers, in general terms medium sized growers felt that funding levels should be more evenly spread across the value chain with small vegetable growers predominantly supporting the general direction although there was a spectrum of views.

Based on this feedback the funding levels were spread more evenly across the value chain with the value chain being consolidated from four to three components.

Development & Release of Strategic Plan White Paper

A White Paper was developed which outlined the purpose of the SIP, analysed the key features of the vegetable industry, its outlook and key challenges as well as provided guidance on the future priority areas for the expenditure of the R&D levy. Key Performance Indicators (KPIs) were suggested along with an overarching approach to implementation. This paper was presented to key stakeholders in soft and hard copy format for consideration and made available for public comment. Recommendations and assertions were supported by analysis and findings from the earlier phases of this engagement.

Delivery of the Vegetable Industry's SIP

Twenty formal, written responses to the White Paper were received; which incorporated 116 identified specific requests for changes to the SIP. Over half of these feedback suggestions were incorporated into the final version of the SIP.

This document was presented to the IAC, AUSVEG Board of Directors and HAL Board of Directors. This presentation reviewed the SIP process as well as highlighting key changes since the development of the White Paper. These key stakeholders, including AUSVEG and HAL, have now endorsed the SIP. The National Convention in May of 2012 will be used as an opportunity to present the SIP to the restructured Working and Advisory Groups.

In total, CIS identified 330 people who participated in and contributed to the development of the SIP. These participants are categorised in Table 1.

Table 1 – Summary of Stakeholder Groups Consulted

Stakeholder Groups	Count
Number of Working Advisory Group Participants	51
Number of Growers Involved	72
Peak Body Members Interviewed	20
Other Industry Body Members Interviewed	14
Buyers & Sellers Interviewed	10
R&D Levy Service Providers and Analysts	26
Government Members Interviewed	3
Other	4
National Consultation Phase:	
Levy Payers	104
Non-Levy Payers	26
Total Number of Stakeholders Contacted	330

Evaluation

The aims of the SIP, set out in the original proposal, have now been met. The three key objectives of the SIP as stated in the project proposal and subsequent contract were to:

1. **“Redevelop the strategic investment plan for the vegetable industry.”**
The original strategic plan, VegVision 2020, has been redeveloped through this process. The Strategic Investment Plan bears little resemblance to the VegVision 2020 document.
2. **“The SIP will outline an aspirational vision for the industry, providing a foundation for future investment and a baseline measure of performance which future industry activities can be measured.”**
The SIP has established a new vision as well as KPIs for the industry; however, KPIs may need refreshing once census data becomes available.
3. **“An accompanying implementation framework will outline key activities and next steps which need to be taken.”**
CIS developed a detailed implementation plan which has been used as the basis of the implementation approach. Implementation, under the direction of HAL and AUSVEG, commenced during the development of the CIS implementation plan.

Positive aspects of the project

1. **Communication/stakeholder engagement** - The high degree of levy payer consultation, with three rounds of formal consultation and presentations at the national convention, served to maximise the communication to levy payers. Promotion of the SIP was also achieved through publications and the distribution of the White Paper for commentary and feedback. The bodies that govern levy funding are supportive of the SIP.
2. **New investment approach** - The SIP proposes and substantiates a new focus for the future investment of the R&D levy with a structure to maximise the impact this new structure will have. This new direction is now supported by vegetable growers and impact modelling. Significant additional benefit is projected to flow to the industry as a result of this reprioritisation of levy investment.
3. **Independent review** - Given the range of stakeholders involved in the vegetable industry and the political nature of its governance, it was important to have an independent assessment of the industry. This allowed for objective review and direction-setting to occur.

Cost/benefit analysis

Matched levy fees funded the SIP. A breakdown of fees is as follows:

Cost item	Amount
Development of the SIP	\$275,000
National Consultation	\$29,000
CIE Economic Impact Modelling	\$20,000
Travel, graphic design and printing expenses (budget)	\$30,000
AUSVEG administration	\$71,500
Total fee	\$425,500



The benefit and context of this funding can be considered from a number of perspectives:

- Levy funds comprise \$13 million in 2010/11 of which the SIP consumed 3.3% of one year's funding.
- Modelling of the benefits of the SIP suggest that an additional \$53 million in profits will be directly attributed to the SIP between now and 2023/24.
- The vegetable industry is a \$1.8 billion dollar industry. The SIP represents 0.0024% of this annual budget.
- The original VegVision 2020 document consumed over \$1 million in the development in 2006.

Implications

Key Learnings of the project and implications to the industry

The SIP document describes, in detail, the key insights that came to light through the consultation project. Below are a select few insights and related implications that are of significant importance to the industry as it makes strategic decisions going forward.

Growers' success is strongly correlated with size of operations

Recent ABARE statistics show that when vegetable growers are disaggregated by size there is a close correlation between size and profitability. The top 25% of growers are more profitable, with average cash incomes (revenue minus costs) in excess of \$6 million.¹ Of the bottom 25% of growers, one third of them are failing to cover the costs of production. Explanations have been sought for this difference in performance. The more profitable vegetable growers:

- Operate on larger farms and are more specialized in vegetable production;
- Achieve economies of scale in production;
- Have higher levels of debt and therefore less equity in their farms (higher revenues however enables lower debt servicing ratios); and
- Are more likely to export and sell to markets interstate as well as directly to vegetable processors.²

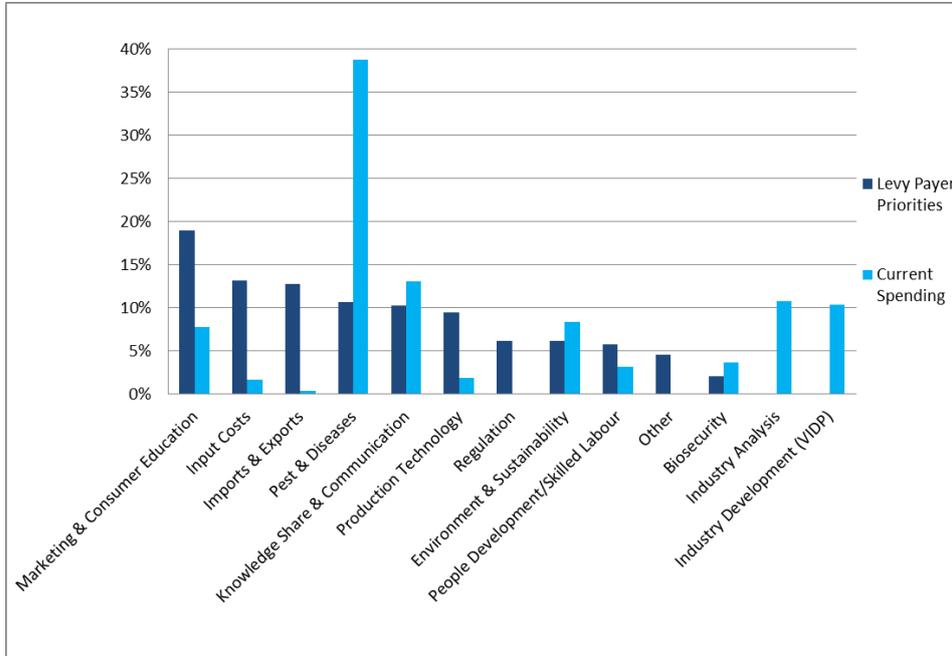
This finding implies to the industry decision makers that there will be greater success for the industry overall if R&D investment is used less to subsidise the smaller growers and more to advance the technologies and practices of medium to larger growers. It is assumed that benefits will trickle-down to those smaller growers with the appetite to advance their own operations.

Recent R&D investment does not reflect the concerns of growers today

Grower surveys identified the major concerns for growers around the country. Results demonstrated that growers are aware of the opportunities for increasing demand and expanding markets through consumer education and value-adding techniques. When comparing the responses from growers to the actual spend of the R&D portfolio, we learn that there is a mismatch between the two and an opportunity to shift funds away from traditional pest/disease research and more into value-adding research and value chain development to achieve higher profits for growers. The following table illustrates this point.

¹ Ian James, 'The other side of the coin', Vegetables Australia, January/February 2011, p.40

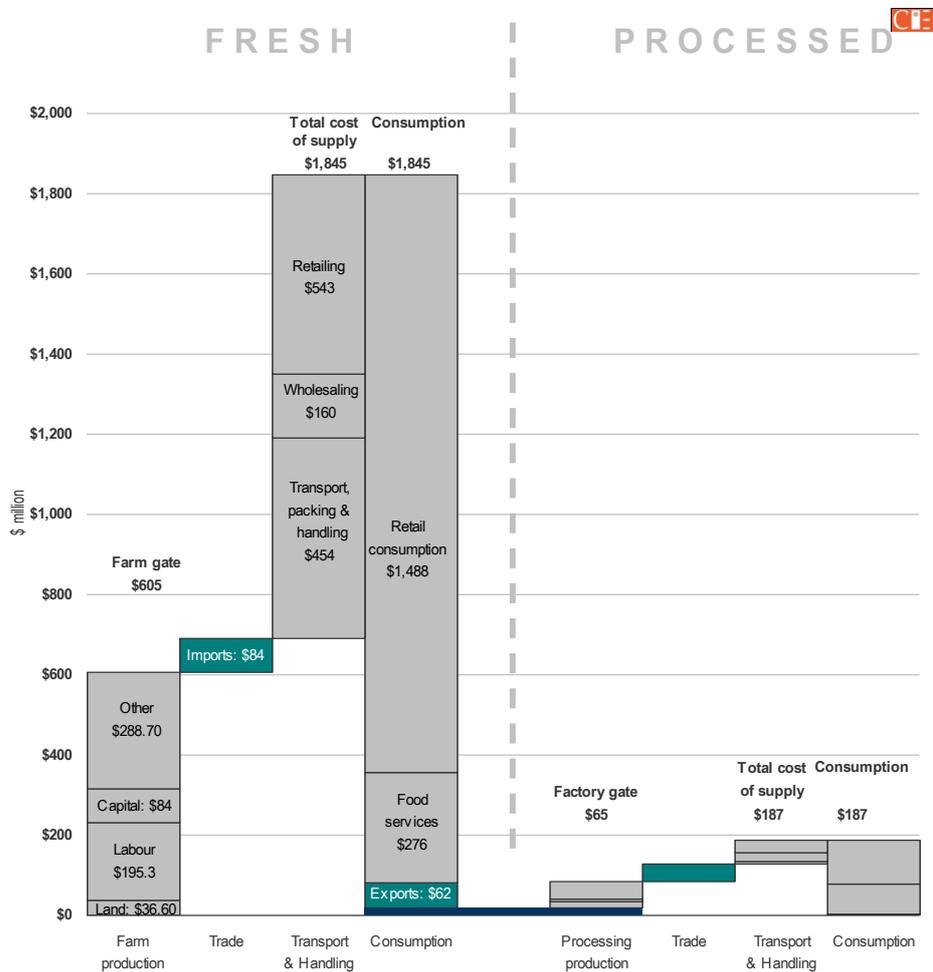
² Ian James, 'The other side of the coin', Vegetables Australia, January/February 2011, p.41



Value Captured by Vegetable Growers Lags behind Horticulture

Post farm gate costs of the horticulture sector generally account for half of the total value of the industry. In the vegetable sector, however, the post farm gate costs account for only two-thirds of the total industry value. The implications of this are that there are opportunities for the industry to increase its bargaining power and/or integrated downstream to capture a greater share of the value created by the supply chain.

The following figure summarises the key features of the aggregate value chain for the Australian leviable vegetable industries. It demonstrates how the retail value of levied vegetables (\$1.845 billion) is allocated across the various supply chain activities and allocated across the various consumption channels. For example, \$600 million of industry value is allocated to on-farm costs and profits, with an additional \$84 million of imported vegetables being sold into the Australian markets, and \$454 million of added-value provided by transport, packing, and handling services adding to the total sales price. These three cost categories produce the roughly \$1.2 billion annual value of product that is subject to the national vegetable levy; producing approximately \$6 million per year in levy funds; which is matched by the Commonwealth.

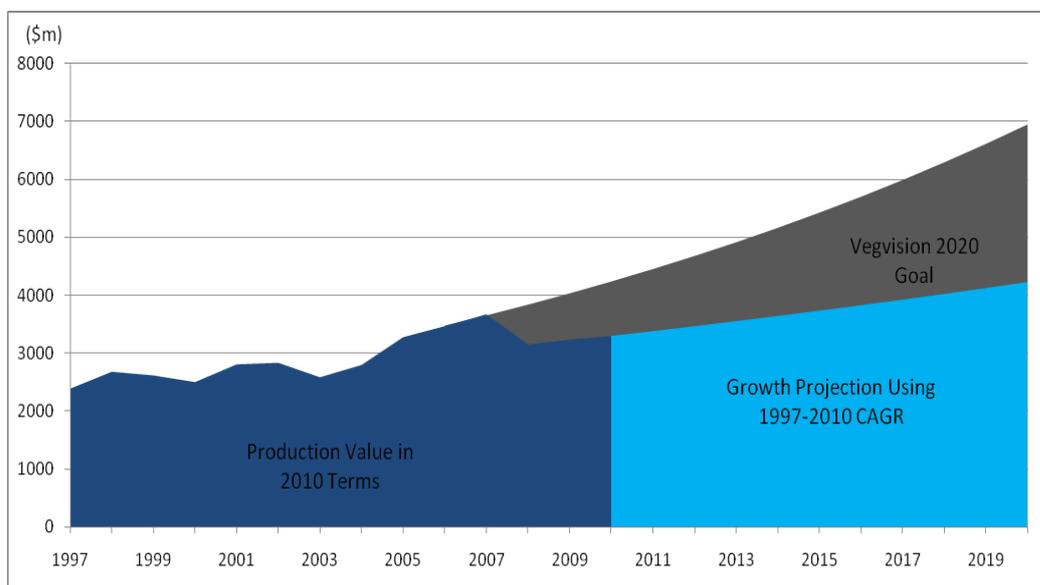


The Industry is not Meeting the Goals Set by VegVision 2020

The real Compound Annual Growth Rate (CAGR) for total vegetable farm gate value since 1997 has been 2.5%. Since the adoption of VegVision 2020 in 2006, the CAGR has declined to 0.1%. However, the 14% decline in vegetable value in 2008 was considered an outlier when analysing this figure. Eliminating 2008 from the analysis results in a 2006-2010 CAGR of 4%; comparable to the CAGR of years prior to the adoption of VegVision 2020. As such, CAGR for years 1997-2010 was used to project years 2011-2020. This was then compared to VegVision’s goal of doubling in real terms the value of the entire vegetable industry.

In order to meet this goal of VegVision 2020, the industry would need to grow roughly 5% each year since 2006. Given that the last four years have seen an annual growth rate of less than 1%, the industry is significantly off course. Figure 19 illustrates the industry’s historical growth (in 2010 AUD terms) and uses this to forecast vegetable production value to 2020.

Total Vegetable Production Value; Historical and Projected*



*Note production value projections in VegVision 2020 included both leviable and non leviable vegetables.

Impact Modelling Suggests a Shift in Funding to Grow Consumer Demand

Impact modelling performed by CIE used historical economic information to predict reasonable estimates of factors such as domestic consumption of vegetables, willingness to pay of vegetable products, supply chain and market expansion, changes to productivity and supply levels, changes to input costs, etc. Using these scenarios to predict the resulting aggregate profits to growers suggested the following optimal R&D investment mix:

- Consumer Demand: 54%;
- Market Development: 22%;
- Farm Productivity: 17%; and
- Resource use: 8%.

The implications to this are that the industry is limited in terms of how much value comes from investment in production and pest/disease issues. This suggests a more integrated mix of funds along the supply chain; making efforts into increasing demand as well as expanding markets and increasing (or at least stabilising) on-farm efficiencies.

Identification of Industry Challenges, Opportunities, Strengths and Weaknesses

Challenges to the Industry

- Increasing imports to the industry, particularly within the frozen and processed vegetables.
- Rising costs of inputs on farms is creating a margin squeeze for growers. This includes increases costs due to labour shortages, variable climates, chemical/pest management, soil and water shortages, possible carbon taxes, etc.
- Recent foreign currency volatility is making it difficult for the industry to plan for exporting channels.
- The diversity of growers and their respective needs is a challenge for the industry in terms of planning R&D investment and the likelihood of grower adoption of projects.

Opportunities for the Industry

- With growers currently only capturing around 33% of the value within the supply chain, there is opportunity for this to increase to the level of overall horticulture (50%).
- The small number of growers currently targeting export channels and the growing wealth of Asia implies that there is a future opportunity to grow the industry through exports.
- The industry has opportunities to increase the price that consumers are willing to pay for vegetables through a transition away from commodity products and into more value-adding differentiation.

Industry Strengths

- Australia is recognised as a high quality, environmentally compliant producer of vegetables when compared to global competitors.
- Low variable costs to growers mean greater flexibility in crop mixes allow growers to be more opportunistic.
- With increasing globalisation and a burgeoning middle class in Asia, Australian is well placed for export expansion if economic conditions sustain these opportunities.

Industry Weaknesses

- The abundance of growers, the commoditisation of products, and the competitive culture of growers limits their bargaining power and results in the industry being price-takers.
- Complacency among the many small and medium growers restricts the likelihood of ambitious ventures like exporting and supplier relationships.

- 
- The lack of capital among many growers puts a limit on the advancement of mechanisation as a solution to rising labour costs (among other rising input costs).
 - The political nature of industry, an absence of credible industry data, and the lack of efficient means for grower communication to industry leaders makes direction-setting and change implementation a slow, difficult, and expensive process.
 - Projects offered to the IAC are mostly research-driven, rather than end-user driven; resulting in a mismatch between grower concerns and R&D investment.

Consideration for future planning

A number of aspects could be considered to maximise the efficiency and impact of future SIP processes. These include:

1. Forming close partnerships with SIP consulting providers where their experience and capability can be leveraged across other sectors;
2. Providers teaming with economic impact modellers who are familiar with the industry, to ensure a seamless integration of impact modelling results; and
3. The use of a relatively standard methodology and template of outcomes to ensure consistency and comparability of performance across the sectors.

Recommendations

The project assessed the overarching strategic plan for the industry, the decision-making process for R&D levy spending, how the R&D levy spending and implementation has occurred to-date, how the performance of the industry should be measured and the key areas of spending which will achieve the desired industry performance.

This analysis has highlighted that clearly defined strategic priorities and goals are needed to guide R&D levy funding, to ensure that outcomes from the vegetable R&D investment are measurable, monitored and contribute directly to the goals of the industry.

This analysis has yielded 9 recommendations, which have been translated into the SIP for the industry. The recommendations from the review are outlined below.

Recommendation 1: The vegetable industry adopts the following vision: *“To be a cohesive, financially and environmentally sustainable, and highly productive industry focused on growing demand profitably”*.

Recommendation 2: The industry adopts the following three strategic priorities: consumer alignment; market and value chain development, and farm productivity and resource use and management. The industry should also adopt an industry development drive train to support the functions for achieving these objectives.

Recommendation 3: Given the barriers to establishing a marketing levy, the range of activities to be implemented as part of the SIP, alternative funding for marketing investment potentially available, and the significance of other structural reforms outlined in this SIP, it is recommended that a marketing levy should not be pursued over the next 3 to 5 years.

Recommendation 4: Any consideration of a marketing levy should be supported by a full business case.

Recommendation 5: A pilot cooperative model should be trialled with the learnings used as a model for further extension into other regions of Australia that meet the aforementioned criteria for cooperative development.

Recommendation 6: R&D levy spending is allocated to the strategic priorities of the Strategic Plan using the following proportions as guidance:

- Consumer Alignment: 45%;
- Market and value chain development : 20%;
- Farm productivity, resource use and management 35%

Recommendation 7: Industry accepts the following KPIs and supporting goals for the vegetable industry:

Key Performance Metrics	Rationale
1A. Increase Vegetable Consumption beyond domestic population growth.	It is vital that the industry understands and meets changing consumer preferences. Consumption increases are expected from population growth but cannot be attributed to the success of the SIP. In addition there is a general decline in per capita consumption of leviabile fresh vegetables. Consumption increases which offset this rate of decline reflects the real performance of initiatives in this area.
1B. Increase the Gross Value of Production at the farm gate level.	The gross value of production considers both the quantity of production and price. Production increases typically serve to lower prices. Measuring value takes into consideration both the changes in production outputs and the changes in prices received by growers.
2A. Increase Farm Gate Value as a share of overall consumption value.	The farm gate value of the vegetable industry, relative to other horticulture sectors, comprises a relatively small share of the overall market value of vegetables. In horticulture, the value of farm gate produce is generally over 50% of the total value of the industry. In the vegetable industry it is approximately 1/3. It is important therefore that the industry is able to implement initiatives that will reduce post farm gate costs or increase the proportion of value received by the farmer (based on the ratio of farm gate prices to retail prices).
2B. Maintain Exports as a share of total domestic production.	Exports, represents a major opportunity for the industry. If the industry achieves its vision and implements the objectives of the SIP, greater export penetration in time will be a logical consequence for the industry.
3A. Decrease Input Costs as a proportion of the value of farm gate production.	Reducing input costs will play an important role in levy payer's profitability. Increasing the price or quantity of production or reducing the costs of inputs will all add to profitability.
3B. Decrease the Average CO² Emissions per unit of production.	Sustainable environmental practices are becoming increasingly important for the industry. At the time of writing the Federal Government had recently announced a 'Carbon tax'. Reducing greenhouse gases is a key measure of environmentally sustainable practices. Using this measure as a KPI in the long-term is contingent upon the existence of a carbon tax and the establishment of a standard measuring methodology adopted by the industry.
3C. Increase the Take-Up Rate of the industry's environmental programs.	The interest of the industry in being more environmentally sustainable can be measured through the participation of the industry programs that promote environmental consciousness and sustainability practices.
4A. R&D funding remain aligned to the stated SIP allocations, to within 10%.	This will ensure that funding follows the Strategic Investment Plan and does not gravitate back too heavily into Pest and Disease projects. Measuring this indicator will involve analysis of the industry project portfolio which is maintained by HAL.
4B. Increase end user	This will provide valuable market intelligence to the IAC when



satisfaction of each R&D project provider.	considering projects and will help drive a culture of developing and delivering projects that maximise the impact for levy payers. Measuring this indicator can be done through exit surveys done by end users involved with each R&D project.
4C. Increase the percentage of levy funded projects that have grower end user participation.	This KPI is intended to measure the degree to which projects are end user driven, and therefore seen as beneficial to growers. This will also measure the magnitude of confidence that growers have in the success rate of levy funded projects. Measuring this indicator will involve analysis of the industry project portfolio which is maintained by HAL.

Recommendation 8: The industry adopts the overall aggregate grower profitability by 42% (from \$126 million in 2011/12 to \$179 million in 2019/20).

Recommendation 9: Given the changes in R&D levy allocations proposed, levy funding beyond the target investment guidelines can be allocated where a reasonable project addressing a major emerging issue is justified. Projects should be evaluated on a case-by-case basis and reasons to deviate from the target allocations should be noted, significant, and reasonable.

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