

Horticulture Data Audit

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AEC Group Limited

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**Volume I: Review of Data Sources
and Strategy**

Horticulture Australia Limited

Final Report

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Purpose of the Report

The critical outcome from the project is the development of a straight forward, easily implemented and transparent strategy to develop recommendations for collating identified industry data and information needs and, importantly, highlighting the benefits of collating this information for industry.

This information audit will form the first stage in the development of a detailed data storage and analysis database to inform industry and to estimate the GVP of horticulture.

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Media Summary

There is increasing awareness that existing statistics for the Australian horticulture sector are insufficient to meet industry development needs and require urgent attention. Whilst some data is excellent, there are relatively few accurate sources of industry wide statistics, and many of the existing sources have a number of significant pitfalls.

Consultation with all key horticulture Peak Industry Bodies (PIBs) and a comprehensive desktop review of existing and available data was undertaken in order to identify key industry data and information needs for facilitating and informing strategic industry development.

The following data, information and process requirements were identified:

- Collection of production data for each individual horticulture commodity;
- Collection and/ or reporting of production and price data at regular intervals throughout the year in order to assess seasonality and timing of production as appropriate;
- Comprehensive farm cost of production and capital cost data;
- Collection and analysis of data at growing regional and sub-regional levels;
- Collection of first point of sale volume and price data by distribution and/ or market channel;
- Increased collaboration and standardisation of the types of data collected and the data collection methods;
- Cooperation and collaboration with industry participants in order to minimise the errors in data collection and maximise the efficiency of collection processes;
- Verify and validate data that is collected to ensure accuracy and consistency of reporting between collection points;
- Collection of import and export data by commodity, variety, level of processing and destination or exporting country;
- Collection of information regarding trends in domestic and global production and market conditions; and
- Collection of information on consumer preferences and market research.

The following key activities were identified as being critical in the delivery of the goal of improved data collation and analysis for the horticulture sector:

- Collaboration with existing organisations to coordinate and maximise the efficiency of existing data capture processes.
- Standardisation of core industry data collected for across industry comparison.
- Development of new data collation processes to increase the quality of existing data.
- Collation and management data so that it may be readily analysed to respond to key industry issues.

Technical Summary

Introduction

There is increasing awareness that existing statistics for the Australian horticulture sector are insufficient to meet industry development needs and require urgent attention. Whilst some data is excellent, there are relatively few accurate sources of industry wide statistics, and many of the existing sources have a number of significant pitfalls.

The aim of this project was to conduct a comprehensive audit of the data and information currently available at the farm-gate level to enable an accurate estimation of the Gross Value of Production (GVP) for Australian horticulture and a detailed consultation process to identify key industry data and information needs to facilitate and inform strategic industry development and ultimately to assist industry and business expansion.

Methodology

The audit was conducted through consultation with all key horticulture Peak Industry Bodies (PIBs) and a comprehensive desktop review of existing and available data from:

- Commonwealth government departments and agencies;
- State government departments and agencies;
- Peak industry bodies;
- Private sector business and organisations; and
- International government departments and agencies

Findings

The following data, information and process requirements were identified following the assessment of the currently available data and consultation with industry:

- Collection of production data for each individual horticulture commodity;
- Collection and/ or reporting of production and price data at regular intervals throughout the year in order to assess seasonality and timing of production as appropriate;
- Comprehensive farm cost of production and capital cost data;
- Collection and analysis of data at growing regional and sub-regional levels;
- Collection of first point of sale volume and price data by distribution and/ or market channel;
- Increased collaboration and standardisation of the types of data collected and the data collection methods;
- Cooperation and collaboration with industry participants in order to minimise the errors in data collection and maximise the efficiency of collection processes;
- Verify and validate data that is collected to ensure accuracy and consistency of reporting between collection points;
- Collection of import and export data by commodity, variety, level of processing and destination or exporting country;
- Collection of information regarding trends in domestic and global production and market conditions; and
- Collection of information on consumer preferences and market research.

Strategy

The following key activities were identified as being critical in the delivery of the goal of improved data collation and analysis for the horticulture sector:

- Collaboration with existing organisations to coordinate and maximise the efficiency of existing data capture processes.
- Standardisation of core industry data collected for across industry comparison.
- Development of new data collation processes to increase the quality of existing data.
- Collation and management data so that it may be readily analysed to respond to key industry issues.

Executive Summary

The Challenge

There is increasing awareness that existing statistics for the Australian horticulture sector are insufficient to meet industry development needs and require urgent attention. Whilst some data is excellent, there are relatively few accurate sources of industry wide statistics, and many of the existing sources have a number of significant pitfalls.

The Response

Conduct a comprehensive audit of the data and information currently available to enable an accurate estimation of the Gross Value of Production (GVP) for Australian horticulture and a detailed consultation process to identify key industry data and information needs to facilitate and inform strategic industry development and ultimately to assist industry and business expansion.

Goal: *To facilitate industry development, tactical and strategic industry planning through the improved collection, analysis and dissemination of information.*

Outcome: *Increased quality, consistency and standardisation of data, analysis and reporting across all horticulture industries, for the estimation of the gross value of production (GVP) as well as the strategic planning and development of individual industries and the wider horticulture sector.*

This audit examines data available in the production cycle to the farm gate.

The Process

Consultation with all key horticulture Peak Industry Bodies (PIBs) and comprehensive desktop review of existing and available data from:

- Commonwealth government departments and agencies;
- State government departments and agencies;
- Peak industry bodies;
- Private sector business and organisations; and
- International government departments and agencies

The Requirements

The following data, information and process requirements were identified following the assessment of the currently available data and consultation with industry:

- Collection of production data for each individual horticulture commodity, including (where appropriate):
 - Number of trees / plants in the ground by variety;
 - Number of new plantings by variety each season;
 - Number of trees / plants removed by variety each season;
 - Age of trees / plants by variety; and
 - Production per tree / plant;
- Collection and/ or reporting of production and price data at regular intervals throughout the year (i.e. weekly, monthly or quarterly) in order to assess seasonality and timing of production as appropriate;
- Comprehensive farm cost of production and capital cost data;
- Collection and analysis of data at growing regional and sub-regional levels;

- Collection of first point of sale volume and price data by distribution and/ or market channel (i.e. wholesale, retail, farmers market, etc.);
- Increased collaboration and standardisation of the types of data collected and the data collection methods between Commonwealth and State Government and PIB organisations and departments;
- Cooperation and collaboration with industry participants in order to minimise the errors in data collection and maximise the efficiency of collection processes. Specifically, it is important to:
 - o Identify central data capture points for each industry, such as processors, market agents, etc.; and
 - o Demonstrate the benefits to industry participants of providing accurate data, in particular those involved at central capture points;
- Verify and validate data that is collected to ensure accuracy and consistency of reporting between collection points;
- Collection of import and export data by:
 - o Horticulture commodity;
 - o Variety;
 - o Level of processing; and
 - o Destination (for exports) or exporting country (for imports);
- Collection of information regarding trends in domestic and global production and market conditions (for competitor analysis and identifying potential market opportunities); and
- Collection of information on consumer preferences and market research.

The Strategy

The following key activities have been identified as being critical in the delivery of the goal of improved data collation and analysis for the horticulture sector.

- Collaboration with existing organisations to coordinate and maximise the efficiency of existing data capture processes.
- Standardisation of core industry data collected for across industry comparison.
- Development of new data collation processes to increase the quality of existing data.
- Collation and management data so that it may be readily analysed to respond to key industry issues.

There is significant commonality regarding the process for the delivery of the above key requirements. The following tables outline the two key strategies to be employed in the delivery of improved data and information, namely:

- **Engagement and consultation** to facilitate collaboration and partnerships; and
- **Development, implementation and management** of the data collation and management system.

The individual actions, responsibilities and expected resource requirements for the above strategies are outlined in the following pages.

Engagement & Consultation

Strategy & Actions	Responsibility & Partners	Timing	Mechanisms	Measure
<p>1. Inform and educate key stakeholders. Provide industry and key government and private sector organisations with balanced and objective information to assist in understanding the problems, opportunities and/or solutions.</p>	<ul style="list-style-type: none"> • HAL • PIBs • ABS • ABARE • DAFF • Private Sector Organisations 	Year 1	<ul style="list-style-type: none"> • Letter, email and phone contact 	<ul style="list-style-type: none"> • Number of PIB's actively engaged • Number of relevant private and public sector organisations actively engaged
<p>2. Consult and involve key stakeholders. Work directly with industry & organisations throughout the process to identify potential collaborative opportunities and benefits of providing this information. This stage needs to ensure that all concerns and aspirations are understood and considered with feedback obtained on proposed issues and/or solutions. Specifically, consult with PIBs and Industry Management Committee as well as private and government sector agencies to confirm the baseline data set to be collated on a consistent basis across all horticulture sectors.</p>	<ul style="list-style-type: none"> • HAL • PIBs • ABS • ABARE • DAFF • Private Sector Organisations 	Year 1 & 2	<ul style="list-style-type: none"> • Face to face meetings • Workshops with like organisations and stakeholders • Feedback mechanisms and reporting • Regular & consistent communication 	<ul style="list-style-type: none"> • Range of consistent opportunities by sector and stakeholder type
<p>3. Empower partner organisations in the decision making process. Partner with each organisation and include them in the selection of appropriate data collation mechanisms and procedures. Ultimately placing the final decision making responsibility onto the partner organisations (PIBs & Government agencies) to ensure ownership and support of the process.</p>	<ul style="list-style-type: none"> • HAL • PIBs • ABS • ABARE • DAFF • Private Sector Organisations 	Year 1 & 2	<ul style="list-style-type: none"> • Consultation & discussions ultimately resulting in a MOU between agencies, organisations and relevant PIB's 	<ul style="list-style-type: none"> • Formal stakeholder support regarding ongoing individual collaborative arrangements
<p>4. Collaborate with partner organisations to implement data collation and management systems. Partner with the relevant organisations to capture requisite data as per Action 3 in the Development and Implementation Strategy. Engage with relevant stakeholders regarding the opportunities and benefits related with making this information available. Address and identified confidentially issues.</p>	<ul style="list-style-type: none"> • All relevant partners and industry sectors 	Ongoing	<ul style="list-style-type: none"> • Action MOU as per strategy and agreement 	<ul style="list-style-type: none"> • Regular report for each participating industry

Development, Implementation & Management of the Data Management System

Strategy & Actions	Responsibility & Partners	Timing	Mechanisms	Measure
<p>1. Develop data collation protocol and management system in consultation with key stakeholders.</p> <p>Design specification for and develop a relevant data management system. It is expected for ease of application and use across a range of sectors that a relational web-based database would be most suitable.</p> <p>Identify and develop new data collation processes (centralised data collection/ processing points, surveys, etc) as appropriate. This step should consider the marginal cost of additional information collation to ensure the efficiency of any additional data collation mechanisms.</p> <p>Identify the most efficient and effective means to collate consistent time series data for industry requirements across all horticulture sectors. Ideally this would be undertaken at a regional production base for aggregation to state and other relevant boundaries for analysis, reporting and lobbying.</p> <p>2. Validate all data and data sources.</p> <p>Validate data sources and process of collation to ensure systems developed provide accurate and applicable data on a repeatable basis. Validation, would ideally be undertaken on an annual process for all data sources, however, it is particularly important when developing and refining the initial data capture system/ process.</p>	<ul style="list-style-type: none"> • HAL • PIBs • ABS • ABARE • DAFF • Private Sector Organisations 	Year 3	<ul style="list-style-type: none"> • Engage specialist skills & expertise (in and/or not in-house) 	<ul style="list-style-type: none"> • Completion of design specification • Development and hosting of database
<p>3. Collaborate with partner organisations to implement data collation and management systems.</p> <p>Commence data collation in the format required for inclusion into the ultimate data management system (expected to be a relational database).</p>	<ul style="list-style-type: none"> • HAL • All relevant partners 	Year 3	<ul style="list-style-type: none"> • Collation of preliminary data via data collation mechanism • Testing and validation of data sets • Consultation with providers and analyst • Review and refinement of data collation process 	<ul style="list-style-type: none"> • Standard errors. • Explanatory variables
<p>4. Maintain ongoing contact with partner organisations to manage and ensure consistency of reporting and refine system.</p> <p>Work with partner organisations and data suppliers to refine and improve the data collation systems to minimise cost, maximise accuracy and ensure consistency of application.</p>	<ul style="list-style-type: none"> • HAL • PIBs • ABS • ABARE • DAFF • Private Sector Organisations 	Year 3-4 and ongoing	<ul style="list-style-type: none"> • Implement identified refined data collation mechanism by industry and data source 	<ul style="list-style-type: none"> • Population of database with initial data • Ongoing updates
	<ul style="list-style-type: none"> • HAL • All relevant partners 	Ongoing	<ul style="list-style-type: none"> • Review reporting base data collected and collation mechanism every 3-5 years and refine for further development 	<ul style="list-style-type: none"> • Findings of process review • Findings and feedback summary of consultation



Strategy & Actions	Responsibility & Partners	Timing	Mechanisms	Measure
<p>5. Develop reporting frameworks. Develop common reporting and analysis systems for the overall horticulture sector, relevant sub-sector groupings and individual commodities. Develop specific industry analysis and reporting procedures are required and made available.</p>	<ul style="list-style-type: none"> • HAL • All relevant partners and industry sectors 	Ongoing	<ul style="list-style-type: none"> • Develop preliminary reports • Review and refine • Develop final reports 	<ul style="list-style-type: none"> • Regular report for each participating industry

Glossary of Terms

Ad Valorem	According to the value. This term is used in commerce in reference to certain duties, called <i>ad valorem</i> duties, which are levied on commodities at certain rates on their value.
AHECC	Australian Harmonised Export Commodity Classification code. Similar to the HS Commodity Codes, the AHECC code is an 8-digit code used by the Australian Customs Service for classifying imported or exported goods. The use of two additional digits enables increased identification of goods.
ANZSIC	Australian and New Zealand Standard Industrial Classification. This commodity coding system is used by the ABS for classifying commodities.
C.I.F.	Cost, Insurance and Freight. This is the value of goods at the border of the importing country.
EVAO	Estimated Value of Agricultural Operations.
F.O.B.	Free On Board. This is the value of goods at the border of the exporting country.
Frame	The population of interest for a survey.
FSS	The Farm Structure Survey, which is a farm level survey conducted by the European Union (EU) every two to three years on agricultural holdings in the EU.
GVP	Gross Value of Production.
HS Commodity Codes	The United Nations standard Harmonised Commodity Description and Coding System. This is a standard 6-digit coding system that is used by the Australian Customs Service for recording the details of all commodities imported and exported from Australia.
HTISC	Harmonised Tariff Item and Statistical Code. Australian Customs Service add an additional two digits to the AHECC code for import items to identify tariff items for customs duty, and is referred to as the HTISC.
Primary Data Source	A primary data source is one which represents the original collection of a specific set of data (e.g. surveys, consultation).
Sample	The entities surveyed within the frame make up the survey sample.
Secondary Data Source	A secondary data source is one which uses a previously collected set of data.
SITC	Standard International Trade Classification. The standardised commodity classification coding system used globally.
Standard Gross Margin	The standard gross margin for an agricultural holding for the purposes of the FSS corresponds to the average value, over a three-year period and in a given region, of production minus certain variable costs of the holding. Regional coefficients are applied in determining the standard gross margin for a region.
TREC	Trade Export Classification system. The Department of Foreign Affairs and Trade's unique commodity classification system that classifies goods based on their level of processing.

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1. Introduction

1.1 Background

Horticulture Australia Limited (HAL) require a comprehensive audit of the data and information currently available to enable an accurate estimation of the Gross Value of Production (GVP) for Australian horticulture and a detailed consultation process to identify industry data and information needs to facilitate and inform strategic industry development and ultimately to assist industry and business expansion.

1.2 Purpose of the Report

The critical outcome from the project is the development of a straight forward, easily implemented and transparent strategy to develop recommendations for collating identified industry data and information needs and, importantly, highlighting the benefits of collating this information for industry.

This information audit will form the first stage in the development of a detailed data storage and analysis database to inform industry and to estimate the GVP of horticulture.

1.2.1 Uses of Data

There are two main uses for this database:

- *Strategic Industry Development.* The role of HAL is, primarily, to facilitate and coordinate the long term development the horticulture industry while supporting and upholding the best interests of Australian horticulture business units. The primary use of the data, beyond the calculation of horticulture GVP, is as an input into the strategic management and development of the horticulture industry. As such, a wide range of information regarding issues that impact on the profitability and sustainability of the horticulture industry such as market access and consumer requirements is required.
- *Business Development Planning.* A secondary use of the data would likely be as an input into business development planning at a single or multiple farm or business unit level. At this specific level there is a greater focus on issues that impact on the short term profitability of a business or industry. As such, data relating to avenues for increasing profitability, specifically price and production signals and cost of production benchmarking would be useful.

1.3 Types of Data

Price and quantity, which combine to inform GVP, are key data for industry development and planning. However, for both strategic industry planning and, where applicable, business development planning, other types of data may also be necessary to deliver the requirements of key stakeholders.

It is necessary to look at this data from both a supply and demand side, with strategic development initiatives of both industry and business designed to match supply with demand. The types of supply side data considered relevant include:

- **Volume.** Primarily in terms of volume of product (raw or value added) produced, although other data such as production area, productivity per unit area of production, seasonality and quality are also considered useful for industry and business development;
- **Value.** In particular commodity prices across different quality levels;
- **Capital costs.** For example, cost of land, internal infrastructure such as production plant and processing lines, machinery and equipment, and research and development;

- **Operating costs.** Particularly labour costs, although other input and operating costs also need to be considered as well as maintenance costs, with data collation to focus on fixed and variable costs to establish margins at each level of the supply chain;
- **Efficiency of production.** For example, knowledge or skill levels at both a management and process level, and the production technology and processes used;
- **Constraints to production.** For example, internal and external infrastructure constraints, knowledge or skill gaps, technological or process inefficiencies, and labour availability or shortages; and
- **Other externalities.** Particularly Government legislation and regulation.

The types of demand side data considered relevant include:

- **Quality requirements.** Both consumer and regulatory requirements;
- **Volume or quantity of demand.** The quantity of product demanded given a certain product quality and specification, at a set price in both domestic and international markets;
- **Price.** In both domestic and international markets, accounting for varietal differences, quality specifications and seasonality; and
- **Consumer preferences or specifications.** What product characteristics does the consumer desire and/or require.

There are several points along the value chain (between the producer and the retail market) that these types of data can be collected. Initial data types for industry and business planning along each point of the value chain has been outlined in the table below. Items listed as "N/a" are considered to not be relevant at that level of the value chain.

This audit examines supply side data at the farm gate (growing/harvest) as market and customer requirements data will be pursued on an individual industry basis. Items shaded represent data types for which sources have currently been identified as part of the literature review focusing on data applicable for GVP estimation.

Table 1.1: Recommended Data for Industry and Business Planning

Data Type	Growing/ Harvest	Transport/ Storage	Processing/ Packaging	Transport/ Storage	Wholesale	Retail
Supply						
Volume						
Quantity						
Production Area (Ha)		N/a	N/a	N/a	N/a	N/a
Seasonality						
Location						
Quality of Product						
Value						
Price Received						
Domestic Markets						
International Markets	N/a	N/a	N/a			
Import Volume	N/a	N/a	N/a			
Other Income						
Cost of Production						
Capital						
Land						
Internal Infrastructure						
Machinery & Equipment						
Research & Development						
Fixed Costs						

Data Type	Growing/ Harvest	Transport/ Storage	Processing/ Packaging	Transport/ Storage	Wholesale	Retail
Permanent labour						
Cost						
Skills						
Availability						
Other Fixed Costs						
Variable Costs						
Casual Labour						
Cost						
Skills						
Availability						
Seasonality						
Planting			N/a	N/a	N/a	N/a
Harvest			N/a	N/a	N/a	N/a
Maintenance						
Levies and memberships						
Other Variable Costs						
Efficiency/Productivity						
Knowledge						
Management						
Process/Production						
Innovation						
Technology						
Externalities						
External Infrastructure						
Transport						
Road						
Rail						
Air						
Port						
Utilities						
Government Policies						
Domestic						
International						
Demand						
Quality Requirements						
Consumer						
Regulatory/Legislation						
Volume/Quantity						
Domestic Markets						
International Markets						
Price						
Domestic Markets						
International Markets						
Elasticities of Demand						
Consumer Preference						
Specification						
Size						
Quality						
Seasonality						
Packaging						

There are two types of data sources that are assessed in this report – primary and secondary – with a focus on primary data sources. A primary data source is one which represents the original collection of a specific set of data (e.g. surveys, consultation), while a secondary data source is one which uses a previously collected set of data.

1.4 Report Structure

This report is structured in two separate yet interlinked volumes. Volume I (this volume) outlines and reviews identified Australian horticulture data sources. Volume II, on the other hand, provides an outline of the data sources available by commodity. The structure of this Volume I is as follows:

- *Chapter 1: Introduction.* Overview of the objectives and purpose of this report.
- *Chapter 2: Commonwealth Government Data Sources.* Reviews the available farm-gate data compiled by Commonwealth Government departments and agencies.
- *Chapter 3: State Government Data Sources.* Outlines the available farm-gate data compiled by State Government departments and agencies.
- *Chapter 4: Peak Industry Body Data Sources.* Provides a discussion and review of the data compiled by horticulture Peak Industry Bodies.
- *Chapter 5: Business and Industry Data Sources.* Reviews the available horticulture data compiled by business and industry organisations.
- *Chapter 6: International Data Sources.* Outlines the available horticulture data provided by major international Government departments and agencies.
- *Chapter 7: Data Needs.* Discusses the strengths and weaknesses of presently available farm-gate data and identifies requirements for improving data accuracy and relevance.
- *Chapter 8: Strategy.* Outlines recommended strategies for addressing identified data requirements.

2. Commonwealth Government Data Sources

This section outlines the major Commonwealth Government department and agency sources of price, quantity and cost of production data applicable to the Australian horticulture industry and provides an overview of the type of data available and its reliability.

2.1 Australian Bureau of Statistics

2.1.1 Agricultural Census and Agricultural Survey

The major source of primary agricultural data is the Australian Bureau of Statistics' (ABS) Agricultural Census. The Census has undergone numerous changes since its inception, a reflection of structural changes in the agricultural sector and changing client requirements. However, basic information such as the number of livestock and volume of crops has continued to be collected on a consistent basis. The scope of the collection has changed slightly over time, largely in relation to the size of farms to be included. Currently all farms with an estimated value of agricultural operations (EVAO) of \$5,000 or more are included (there are approximately 147,000 such units).

A major change in recent years is the change in the frequency of the collection. Up to and including 1996-97, the Agricultural Census was conducted annually at the end of March. At this time the ABS moved to its current strategy of an Agricultural Census every five years, in line with the Census of Population and Housing, with sample surveys in intervening years.

The first Agricultural Survey was conducted in 1997-98. As with the Census, the frame population of the Agricultural Survey is all farm establishments with an EVAO of \$5,000 or more (approximately 147,000 agricultural units). The sample size has fluctuated between 28,000 and 35,000, providing relative standard errors of:

- 2.5% at the Australian level;
- 6% at the State level; and
- 12% at a regional level.

Another significant change is in relation to the reference period. Up until the 1999-2000 Agricultural Survey the collection reference period was 1st April to 31st March. In 1999-2000 it was decided to adopt a financial year reference period to reduce the burden on the farming community and to align the agricultural collections with other ABS collections.

The Australian Vegetable and Potato Growers Federation (AUSVEG) and HAL provided additional funding for the 2006 Agricultural Census to expand the range of vegetables and production techniques covered. AUSVEG are providing funding for a similar range of questions to be included in the 2007 Agricultural Survey, and have applied for funding from HAL to continue the expanded range of questions for a further three years in order to build a consistent time series database.

Some issues and limitations exist with the survey and Census, including:

- **Relative standard error of results from using a sample.** Using a survey has the inherent limitation of using the average attributes of a sample to estimate the characteristics of an entire population. While the Agricultural Survey has a relatively low standard error at the Australian level, it is not possible to fully stratify the sample to ensure it is truly representative of the all agricultural establishments with an EVAO of \$5,000 or more. The standard error is higher at a State and regional level due to the smaller sample size, decreasing the confidence in the accuracy of production estimates at these levels;

- **Lack of representativeness of the sample.** From an industry viewpoint, the confidence in the accuracy of data compiled from the survey for an individual commodity is further limited by the lack of representativeness of the sample. The sample is not representative of the actual make-up of agricultural establishments in Australia as the sample is generated with regard given to agricultural/ horticultural commodities as an aggregate rather than individual industries. This means that a variety of industries are likely to be under-represented by the sample, significantly increasing the standard error associated with production data at a commodity level. Further, the representativeness of the survey is lower at a State and regional level due to a smaller sample size;
- **Lack of scope for tracking changes in status of establishments.** The surveys do not facilitate the tracking of changes in status of agricultural establishments over time because the sample changes from year to year. This means that the enterprises from which the data is collected is not the same over the collection series, thus changes to individual establishments can not be measured;
- **Limited scope for horticultural commodity classification.** Despite the Australian Vegetable and Potato Growers Federation (AUSVEG) and HAL providing additional funding for the 2006 Agricultural Census to expand the range of vegetables and production techniques covered, the scope of the survey in terms of classification of agricultural commodities is limited, with historically smaller industries grouped into "other" categories. This limits the amount of information available for these industries and is not representative of structural changes in the agricultural sector in terms of commodities currently grown. The ABS used the Australian Business Register (ABR) as the population frame for the 2006 Agricultural Census in order to improve the collection coverage for a number of commodities, in particular horticultural commodities. It must be noted, however, that the ABR has limitations of its own, such as:
 - o Businesses that operate in more than one State/Territory are listed by their "Main State", which is derived from either the main business address or the State or Territory with the highest employment; and
 - o Each enterprise is classified to a single industry class, irrespective of any diversity of activities undertaken. The industry class allocated is the one which provides the main source of income, which is generally based on a description provided by the business.
- **Inconsistent commodity coding.** Throughout the history of the Census and survey there has been a degree of inconsistency in the coding of commodities between years. For example, there are a number of commodities that have had a variety of different codes between 1993-94 and 2004-05. This issue has been most prevalent for the following commodities:
 - o Apples;
 - o Nashi Pears;
 - o Oranges;
 - o Pears; and
 - o Most commodities within n.e.c.
- **Lack of consideration for the timing of transactions.** The survey covers production area, yield and volume, but not production value. The ABS estimates gross value of production by multiplying production data from the Agricultural Survey with price data obtained from a variety of sources. This method is flawed as the actual value of production of a commodity should be equal to the sum of the value of each discrete transaction (i.e. a weighted average price taking into account seasonal variations should be used) rather than the product of total production for a commodity during the year and an average or point-in-time price. The current methodology does not take into consideration the timing of transactions, that is, the inherent variability of prices received and volumes of commodities traded at these respective prices;
- **Lack of consistency in price data sources.** The method of collection of relevant prices for agricultural commodities and the costs of marketing these commodities vary considerably between States and between commodities. Where a statutory

authority handles marketing of the whole or a portion of a product, the ABS typically obtains price data from this source. However, information is also obtained from marketing reports, wholesalers, brokers and auctioneers. As a result there is a lack of consistency in the price data used between commodities and between years, which can artificially inflate or deflate the relative value of production between commodities;

- **Lack of scope for assessing seasonality.** The survey and Census only provide production data on an annual basis, with no indication as to the timing of production during the year. As such, the data cannot be used to assess seasonality;
- **Significant lag in the release of data.** There is a significant time lag between collection of survey data and the release of final production estimates (around 12 months); and
- **Inaccuracy in reporting.** Anecdotal evidence suggests that some growers do not report accurate figures in the Census or survey. This is due to a number of reasons, including:
 - o An unwillingness to disclose sensitive operating information;
 - o Misunderstanding of the relevance of the Census/survey to certain growers, particularly those whose commodities fall under the “other” categories;
 - o Dislike of the impersonal survey format; and
 - o Property/farm manager time constraints.

Data from the Agricultural Census and Surveys is used, in conjunction with price data collected, to produce estimates of Gross Value of Production (GVP). The industries for which GVP data is available and the relative standard errors associated with data collected from the Agricultural Survey is included as **Appendix A**.

There are a number of freely available publications that are released by the ABS that are based on the data collected in the Agricultural Census and Agricultural Survey. The following table provides a list of the current publications considered relevant.

Table 2.1: Relevant ABS Publications from Agricultural Census and Agricultural Survey Data

Publication Name	Catalogue #	Scale	Industry Level	Frequency
Principal Agriculture Commodities, Australia	7111.0	State	4-digit ANZSIC	Annual
Agricultural Commodities, Australia	7121.0	State	4-digit ANZSIC	Annual
Agricultural Survey, Apples and Pears, Australia	7111.0.55.002	State	Apples and Pears	Annual
Historical Selected Agriculture Commodities, by State	7124.0	State	4-digit ANZSIC	Annual
Value of Principal Agricultural Commodities Produced, Australia	7501.0	State	4-digit ANZSIC	Annual
Value of Agricultural Commodities Produced, Australia	7503.0	State	4-digit ANZSIC	Annual

2.1.2 Other ABS Sources of Primary Horticulture Production Data

The ABS collects, or has in the past collected, a range of other primary data relevant to the horticultural sector. In addition to the Agricultural Survey, up until 2001-02 the ABS also conducted an annual Agricultural Finance Survey (AFS). This survey had a population consisting of all economic units (management units) classified to subdivision 01 Agriculture (which includes horticulture industries) of the Australian and New Zealand Standard Industrial Classification (ANZSIC) based on their principal activity and which had an estimated value of agricultural operations of \$22,500 or more. Around 250 items of financial data were collected including income, expenses, debt, interest paid, asset acquisition and asset value. Data was produced at Australian and State level by industry classification. Since 2001-02 this survey has been suspended, with farm financial data now obtained from ABARE, however ABARE’s survey does not cover horticulture industries.

There are a number of examples of the ABS augmenting the Agricultural Survey to cater for the needs of specific industry groups, generally with additional funding provided from a peak industry body. Some relevant examples are outlined below.

2.1.2.1 Vineyards Survey

This annual survey is conducted by the ABS on behalf of the Grape and Wine Research and Development Corporation (GWRDC). The Vineyards Survey is sent to all establishments for whom a special vineyards flag is set on the Inteframe, or who have an ANZSIC code of 0114 (grape growing) or who show areas of vineyards on the Agricultural Survey / Census. The main purpose of the survey is to collect varietal data on the main grape varieties grown in Australia. The output from the collection is produced at a regional level.

For each variety, the major data items collected include:

- Area planted (split between bearing and non-bearing areas);
- Production of grapes (for winemaking, drying, table or other uses);
- Intended plantings in the coming season; and
- Area of varieties removed or grafted.

Data collected from the Vineyards Survey is used in a number of publications, most notably the annual Australian Wine and Grape Industry publication (catalogue number 1329.0).

2.1.2.2 Apple and Pear Survey

The annual Apple and Pear Survey is conducted by the ABS as a separate collection that complements the Agricultural Census/Survey. The questionnaire is sent to all respondents reporting apple and/or pear trees in the Agricultural Survey or who have been previously flagged on the Business Register as apple or pear (including Nashi) growers. The collection asks for apple and pear tree numbers and production levels by variety and age category. Details of processing production and "on farm" storage capacity area are also sought.

In years where the Agricultural Survey is conducted instead of the Agricultural Census, Apple and Pear Australia Limited (APAL), the peak industry body for the apple and pear industry, has chosen to fund the continuation of a census of all apple and pear respondents rather than a sample.

2.2 Australian Customs Service

The Australian Customs Service (Customs) records the details of all commodities imported to and exported from Australia. Commodities are classified using the United Nations standard Harmonised Commodity Description and Coding System (HS commodity codes). Over 5,000 commodities are tracked under the six-digit HS commodity codes, covering 98% of the world's merchandise trade.

Customs collects a range of details for imported goods, including:

- HS commodity codes;
- Country of origin;
- Australian State of destination;
- Date of arrival;
- Import volumes in quantity and gross weight; and
- Import values in either Free On Board (F.O.B.) or Cost, Insurance and Freight (C.I.F.) terms.

The HS commodity codes often group similar types of items, which limits the level of detail or data richness available for particular commodities. To enable the identification of specific commodities being imported or exported Customs adds two more digits to the HS commodity code. The eight-digit code is referred to as the Australian Harmonised Export Commodity Classification (AHECC) code.

For import items, a further two digits are added to the AHECC solely to enable Customs to identify tariff items for customs duty. This is referred to as the Harmonised Tariff Item and Statistical Code (HTISC). However, it is data collated using the AHECC code that is of relevance to the horticulture industry.

The ABS receives import and export data from Customs daily and publishes this data in a variety of publications (see **Table 2.2** below). These publications primarily classify commodities using the Standard International Trade Classification (SITC).

Table 2.2: Relevant ABS Publications from Customs Data

Publication	Catalogue #	Scale	Industry Level	Frequency
International Merchandise Imports, Australia	5439.0	National	2-digit SITC	Monthly
International Merchandise Trade, Australia	5422.0	By country	2-digit ANZSIC & SITC	Quarterly
International Trade in Goods and Services, Australia	5368.0	National	3-digit SITC	Monthly

Detailed import and export data can be purchased for a fee from the ABS, with data available at the following level of detail:

- Eight-digit AHECC code;
- Country of origin or destination;
- State of origin or destination;
- Volume (by month); and
- Value (by month).

All data is available as a time series.

The main issue or limitation regarding the data collected by Customs is that different horticulture products are tracked to varying degrees of detail by the HS commodity codes and the AHECC code. Many commodities are recorded individually, but some are grouped up into like commodities (e.g. carrots and turnips), while others are categorised under "other". For some commodities fresh produce is tracked in greater detail than its processed or frozen form (e.g. broccoli and cauliflower).

2.3 Australian Bureau of Agriculture and Resource Economics

2.3.1 Australian Wine and Grape Projections

The Australian Bureau of Agriculture and Resource Economics (ABARE) have been commissioned by the Grape and Wine Research and Development Corporation (GWRDC) to produce the annual Australian Wine and Grape Projections publication, based on data collected from the ABS' Vineyards Survey as well as from relevant State Government Departments and organisations.

ABARE can be commissioned to produce other industry publications for a fee.

2.3.2 Whole of Farm Viability Assessment

ABARE conducted a survey in 2005 covering six vegetables over four regions, collecting information regarding whole of farm capital and operating costs as well as production and price estimates. This data was used to assess 'whole-of-farm' viability.

This survey will be conducted again this year and the Australian Vegetable and Potato Growers Federation (AUSVEG) have applied for funding to continue the surveys for a further three years. This years survey will include additional questions covering a range of issues, including water use and product distribution.

2.4 Department of Agriculture, Fisheries and Forestry (DAFF)

The Commonwealth Government Department of Agriculture, Fisheries and Forestry (DAFF) publish a number of secondary data resources relevant to the horticulture industry, including the annual Australian Food Statistics publication and some ad-hoc industry and trade publications.

2.4.1 Levies

Indicative production and, to a degree, value data can be derived from the collection of levies for various horticulture commodities. The table below identifies the horticulture products that the Levies and Revenue Services (LRS), an agency within DAFF, collects

levies on. Levies are payable for products produced in Australia and sold by the producer or used by the producer in the production of other goods.

Table 2.3: Leviable Horticulture Industries

Industry	Fresh	Processing	Basis of Levy Calculation
Almonds	✓	✓	For all leviable almonds: per kilogram
Apples and pears	✓	✓	For fresh apples and pears: per kilogram For juicing and processing apples and pears: per tonne
Avocados	✓	✓	For avocados sold in bulk: per tonne For avocados sold in trays: per standard 6 kilogram tray
Cherries	✓	✗	For all leviable cherries: per kilogram
Chestnuts	✓	✓	For all leviable chestnuts: per kilogram
Citrus	✓	✓	For citrus sold in bulk: per tonne For citrus sold not in bulk: per box
Custard Apples	✓	✗	For custard apples sold packaged: per tray / box For custard apples sold in bulk – per tonne
Dried Fruit	✗	✓	For all leviable dried fruit: per tonne
Lychees	✓	✓	For all leviable lychees: per kilogram
Macadamias	✓	✓	For all leviable macadamias: per kilogram
Mangoes	✓	✗	For all leviable mangoes: per kilogram
Mushrooms	✓	✓	For all <i>Agaricus</i> mushrooms: per kilogram of mushroom spawn produced or sold
Nashi	✓	✓	For fresh Nashi: per tray For juicing and processing Nashi: per tonne
Nursery products	✓	N/a	For all leviable nursery products: sale price of container
Onions	✓	✓	For all leviable onions: per tonne
Papaya	✓	✓	For all leviable papaya: per kilogram
Passionfruit	✓	✓	For fresh passionfruit sold in cartons: per 18 litre carton For fresh passionfruit not sold in cartons: per 8 kilograms For processing passionfruit: per kilogram
Persimmons	✓	✓	For all leviable persimmons: per kilogram
Potatoes	✓	✓	For all leviable potatoes: per tonne
Rubus	✓	✗	For all leviable rubus: per kilogram
Stone fruit	✓	✗	For fresh stone fruit sold in trays: per 5 kilogram tray For fresh stone fruit sold in boxes: per 10 kilogram box For fresh stone fruit sold in bulk: per kilogram
Strawberries	✓	✓	For all leviable strawberries: per 1,000 strawberry runners purchased for commercial production
Table grapes	✓	✓	For all leviable table grapes: per kilogram
Turf	✓	N/a	For all leviable turf: per square metre of turf
Vegetables ^(a)	✓	✓	For all leviable vegetables: <i>ad valorem</i>

Notes: (a) This levy is payable on all vegetables with the exception of asparagus, garlic, hard onions, herbs (other than fresh culinary shallots and parsley), melons, mushrooms, potatoes (other than sweet potatoes), seed sprouts and tomatoes. Hard onions, mushrooms and potatoes have their own levy.

Source: Department of Agriculture, Fisheries and Forestry

This levy data can and has in the past been used to proxy the GVP for some commodities such as vegetables. The estimate arrived at was significantly larger than the ABS estimate of vegetable GVP, providing some evidence that GVP may be underestimated by the ABS.

The levy data does not capture all production and sales and as such underestimates values. A figure of 85% was identified during an industry study as the proportionate level of transactions captured in the vegetable sector.

2.5 Department of Foreign Affairs and Trade (DFAT)

The Commonwealth Government Department of Foreign Affairs and Trade (DFAT) provide secondary data resources such as the bi-annual Composition of Trade publication, the Australian Economic and Trade Statistics publication and reports on the trends and composition of Australian trade with specific regions or countries.

2.5.1 STARS Database

The publications identified above use data stored in DFAT's STARS database, which is a compilation of Australian trade data collected from a variety of data sources, including horticulture data collected by the ABS. All information stored in the STARS database is secondary data that has been collected by other organisations and provided to DFAT. The STARS database is not available for public access.

Commodities in these publications have been classified using DFAT's unique Trade Export Classification (TREC) system, which aggregates Australian exports by their level of processing rather than reporting on the individual commodity type.

2.5.2 Austrade

Austrade, which is part of the DFAT portfolio, also publishes a range of reports on Australian trade, primarily using data sourced from the ABS.

2.6 Rural Industries Research and Development Corporation (RIRDC)

2.6.1 Financial Analyses

The Rural Industries Research and Development Corporation (RIRDC) commissioned financial analyses of eight industries in 1999 as part of a research project, which culminated in the report entitled 'The New Rural Industries – Financial Indicators'. The eight industries assessed were:

- Cashew nuts;
- Coffee;
- Geraldton wax flowers;
- Lychees;
- Olives;
- Peppermint oil;
- Tea tree oil; and
- Walnuts.

Information for these analyses was collected through industry consultation. The analyses incorporated industry estimates of the following ongoing costs of production:

- Seed / stock;
- Water;
- Soil preparation;
- Fertiliser;
- Chemicals and spraying;
- Harvesting;
- Maintenance;
- Disposal; and
- Permits.

Initial investment costs are also incorporated, including:

- Land (purchase / lease and field investigations);
- Building infrastructure;
- Machinery;
- Irrigation; and
- Crop protection (trellises, fences, etc.).

2.7 Productivity Commission

2.7.1 Citrus Growing and Processing Report

The Productivity Commission published a report entitled 'Citrus Growing and Processing' in 2002. This report contains economic analyses conducted by NSW Agriculture and Primary Industries and Resources South Australia (PIRSA) that provide benchmark cost of production estimates for farms in Sunraysia, Murrumbidgee and South Australia regions.

Cost of production data contained in the report includes:

- Planting;
- Chemical spraying;
- Pruning;
- Harvesting;
- Crop management;
- Cartage; and
- Water and power.

The analyses also contain information on the following capital costs:

- Site preparation; and
- Irrigation.

3. State Government Data Sources

State Government agricultural departments report on a wide range of statistics sourced from a variety of sources, in particular the ABS. In addition, some State Governments undertake additional primary data collection, as identified below.

3.1 Department of Primary Industries and Resources of South Australia (PIRSA)

3.1.1 Food ScoreCard

The Food ScoreCard evaluates the contribution made by the food and beverage industry to South Australia's economy from production to consumption. The Food ScoreCard was developed in 1999 to gather baseline data to measure the food industry's achievements and track its progress towards the South Australian Government's \$15 billion target by 2010.

The ScoreCard monitors all food and beverages, either produced or consumed in South Australia, with detailed analysis on key points along the food value chain. Five key sectors are monitored, one of which is horticulture. Each horticulture commodity that is produced in South Australia is individually monitored, with results and data generally reported in aggregate.

Information is sourced from ABS and PIRSA databases, as well as industry consultation. Obtaining information directly from industry sources is undertaken to provide a more accurate industry overview.

The ScoreCard is available at both a State and regional level, and looks at:

- **Gross Food Revenue.** The value of food and beverage retail and service sales.
- **Production Value.** The farm gate value of a commodity, calculated by multiplying the volume of production by the price received.
- **Processing Value.** Captures the value of food and beverages that are processed (at their highest level of processing). This excludes the value that is added to the product by the retailer. Processed foods include those either minimally or highly processed, and the value is represented by their wholesale price into the retail or export markets.

3.2 Northern Territory Department of Primary Industries, Fisheries and Mines

3.2.1 Mango Production Estimates

The Northern Territory Department of Primary Industries, Fisheries and Mines collects production estimates for mangoes on a weekly basis. This information is collected from various points along the supply chain, in particular transport companies and packers. This production data are considered by industry to be indicative estimates only.

3.2.2 Mango Flowerings Survey

The Northern Territory Department of Primary Industries, Fisheries and Mines conducts a survey of mango growers each year requesting information regarding the mango flowerings. The results of this survey are used to predict the timing and quantity of mangoes produced during each season, in order to provide an indication of when peak supply periods for mangoes will be.

The Australian Mango Industry Association are currently seeking to have this survey extended to Queensland.

3.3 NSW Department of Primary Industries

3.3.1 Gross Margin Analyses

The NSW Department of Primary Industries produces gross margin analyses for a number of horticulture industries, including:

- Asparagus;
- Aubergines;
- Beetroot;
- Broccoli;
- Burdock;
- Cabbage;
- Capsicum;
- Carrots;
- Cauliflower;
- Garlic;
- Lettuce;
- Macadamias;
- Onions;
- Parsnips;
- Potatoes;
- Pumpkin;
- Rockmelon;
- Swedes;
- Sweet corn;
- Tomatoes;
- Watermelon; and
- Zucchini.

These analyses provide indicative operating cost of production information, including the following items (where applicable for the industry):

- Planting;
- Chemical spraying;
- Irrigation;
- Pruning;
- Harvesting;
- Mulching;
- Fertiliser;
- Crop management;
- Handling;
- Freight; and
- Marketing.

3.3.2 Macadamia Orchard Whole-of-Life-Cycle Returns Model

The NSW Department of Primary Industries have developed a 'whole-of-life-cycle' returns model, which is capable of providing an indicative benchmark return on capital over a 20 year life-cycle for a macadamia farm. This model includes cost of production and capital cost information.

3.4 Queensland Department of Primary Industries and Fisheries

3.4.1 Transport Volume Data

The Queensland Department of Primary Industries collects information from Queensland transport companies regarding volume of product transported for both mangoes and bananas at the end of each season.

- **Mangoes.** Anecdotal evidence suggests that transport data collected for mangoes may result in some double counting, with some of the product being transported more than once before it reaches its final point of sale.
- **Bananas.** Data is collected from transport companies in Northern Queensland, which accounts for approximately 95% of total banana production in a typical banana producing year. The Australian Banana Growers Council consider this data to be an accurate representation of production as all bananas produced for commercial purposes are transported to market (i.e. there are no local farmers markets).

3.4.2 Banana Plantings Data

Banana growers in Queensland must apply for a planting permit through the Queensland Department of Primary Industries for each plant they intend to grow. This provides an indication of the number of plants in the ground, however no data is collected regarding the number of plants that are removed from the ground and thus is not considered to be an accurate indicator of production or industry expansion.

3.4.3 Growing Guides

The Queensland Department of Primary Industries publishes 'Growing Guides' or similar publications that provide information regarding the start-up requirements for the following industries:

- Avocados;
- Bananas;
- Brassica (including broccoli, cabbage, cauliflower, brussel sprout and radish);
- Capsicum / chilli;
- Cashews;
- Citrus;
- Custard Apples;
- Grapes;
- Lychees and Longans;
- Melons (watermelons, rockmelons and honeydews);
- Onions;
- Papaya;
- Passionfruit;
- Persimmons;
- Stonefruit;
- Sweet corn;
- Sweet potatoes; and
- Tomatoes.

Included in this information are indicative initial and ongoing costs of operation in these industries. Costs of production information varies between industries, but typically includes:

- Land preparation;
- Planting;
- Spraying;
- Harvesting;
- Sorting; and
- Packing.

Infrastructure requirements and indicative cost estimates are also typically reported, including:

- Packing sheds;
- Grader;
- Tractor;
- Chemical sprayer;
- Irrigation; and
- Cold room.

3.4.4 Better Berries Program

The Better Berries Program, a joint project between the Queensland Government and industry, selects and develops strawberry varieties for national and international markets.

The program's research activities are aimed at:

- Increasing varietal diversity;
- Improving yields;
- Reducing chemical requirements; and
- Extending the strawberry growing season.

As part of this program, the Queensland Department of Primary Industries has periodically collected some information on production and prices for strawberries.

3.4.5 Prospects for Queensland's Primary Industries

The Queensland Department of Primary Industries and Fisheries publishes *Prospects*, a guide to the gross value of production (GVP) of the State's primary industries. The first edition for each year is published in September and is updated three times during the year, generally in December, March and June. The September edition provides a comparison between initial GVP forecasts for the current financial year and final estimates for previous financial years for Queensland's major primary industries. Industries are grouped under the following categories:

- Livestock disposals;
- Livestock products;
- Horticulture (including fruit and nuts, and vegetables);
- Lifestyle horticulture;
- Other crops (including sugarcane, cotton and others);
- Cereal grains;
- Fisheries; and
- Forestry.

Horticulture crops included in the publication are:

- Apples;
- Avocados;
- Bananas;
- Beans;
- Capsicum;
- Cut flowers;
- Lettuce;
- Macadamias;
- Mandarins;
- Mangoes;
- Mushrooms;
- Ornamentals;
- Pineapples;
- Potatoes;
- Rockmelons;
- Strawberries;
- Sweet corn;
- Tomatoes;
- Turf; and
- Watermelon.

GVP estimates are derived by multiplying output from each primary industry by the average wholesale market price paid to producers. Estimates and forecasts are based on available statistics, consultation with industry experts and DPI&F staff. Forecasts incorporate prevailing climatic conditions, and assume that further developments reflect 'average' conditions.

The publication includes articles focussing on the activities of individuals and companies in Queensland's primary industries, as well as a feature article about pertinent primary industry topics. *Prospects* also includes discussion and analysis of GVP drivers and value-added markets for primary industries such as the connection to rural property values, investment projects, alternative fuels, weather conditions, and international pricing.

3.5 Tasmanian Department of Primary Industries and Water

3.5.1 Rural and Marine Industry Profiles

The Tasmanian Department of Primary Industries and Water publishes this annual guide to Tasmania's animal, plant, fisheries and organics industries. Industry profiles are provided for each of the following Tasmanian horticulture industries:

- Berry fruit (raspberries, black currants, strawberries and blueberries);
- Canola;
- Chickpeas and lentils;
- Essential oils (peppermint, spearmint, parsley, boronia, blackcurrant, fennel, dill, mountain pepper, lavender, clary sage and hops);
- Faba beans;
- Floriculture (ornamental and cut flowers);
- Fresh vegetables (carrots, lettuce, onions, potatoes, broccoli, greenhouse vegetables, broad beans, French beans, runner beans, cauliflowers, brussel sprouts, green peas, tomatoes, parsnips, swedes, pumpkin, zucchini, celery, sweet corn and cabbages);
- Ginseng;
- Green tea;
- Hops;
- Linseed;
- Lupins (lupini bean and narrow leaf lupins);
- Mustard;
- Nurseries;
- Oilseeds;
- Olives;
- Peas (marrowfat peas, maple peas and blue peas);
- Pome fruit (apples and pears);
- Poppies;
- Processed vegetables (potatoes, green peas, green beans, carrots, broccoli, other brassica and onions);
- Pyrethrum;
- Saffron;
- Stone fruit (peaches, nectarines, apricots, plums and cherries);
- Vegetables for seed (cabbages, cauliflowers, potatoes, carrots, parsnips, onions, spinach, silver beet, Asian vegetables, peas and beans); and
- Walnuts.

The industry profiles provide summary information on a range of topics, with the level of detail varying between profiles based on available information. In general, the types of information available in the industry profiles includes:

- Production;
- Value;
- Processing sector (including major processors);
- Markets and marketing;
- Industry bodies; and
- Indicative costs of infrastructure and production.

The information provided in these industry profiles is sourced from a variety of sources, including the ABS, industry surveys and industry consultation.

3.6 Victorian Department of Primary Industries

3.6.1 Farm Diversification Information Service

The Department of Primary Industries in Victoria periodically publishes a web-based information service that disseminates general information on agricultural industries. Some of these publications provide indicative financial aspects of the industry, including:

- Start-up costs;
- Ongoing operating costs; and
- Returns (based on estimated volume and price ranges).

This information is collected primarily through consultation with the respective Peak Industry Bodies and industry participants. The horticulture industries for which this information is provided include:

- | | | |
|------------------|-----------------|-----------------|
| • Almonds; | • Gooseberries; | • Pistachios; |
| • Bramble fruit; | • Pecans; | • Red currants; |
| • Chestnuts; | • Persimmons; | • Walnuts. |

3.7 Western Australia Department of Agriculture and Food

3.7.1 Fruit Development Budget Guide

The Western Australia Department of Agriculture and Food provide example estimates for fruit crops in south-west Western Australia in their Fruit Development Budget Guide (Miscellaneous Publication 22/2003), which includes:

- Investment results;
- Net profits; and
- Annual cash flow budgets

This publication also outlines indicative start-up and operating costs for pome fruit, stone fruit or citrus farms, which have been developed through consultation with industry.

4. Peak Industry Body Data Sources

This section provides a summary of the data available from each of the Peak Industry Bodies (PIBs) for the horticulture sector. The section has been split into three categories:

- PIBs that collect primary data;
- PIBs that collect and publish secondary data; and
- PIBs that have not been identified, through this project, as collecting or providing publicly available data.

4.1 Primary Data Sources

4.1.1 Almond Board of Australia

Planning activities recently undertaken by the Almond Board of Australia (ABA) highlighted the need for detailed and accurate information for the Australian almond industry. As a first step, the ABA embarked on a grower survey in October 2005 to gather information on plantings, and have also recently begun acquiring data from the major processors in the industry on production and sales statistics. Key data collected and methods are outlined below.

GROWER SURVEY

The grower survey initiated in October 2005 is designed to establish accurate figures on current plantings by:

- Age;
- Variety;
- Spacing; and
- Location.

This data has been used to develop a statistical base, and it is envisaged that it will inform estimates of future development and replanting plans. More than 90% of members completed the survey. The database will be updated with information on plantings and removals on an ongoing basis.

The findings of the survey were presented in the 2005 Australian Almonds Planting Report, and it is envisaged that this will become an annual report for extension to the Australian almond industry.

MAJOR PROCESSOR DATA

The almond processing industry has relatively few key participants, with nearly all almonds produced sold to one of four major processors. It is estimated that these four processors purchase approximately 98% of all almonds produced in Australia. The ABA has begun collecting volume data from the four major processors as of this year (2006), in terms of:

- Production as estimated from quantity of almonds purchased; and
- Sales by destination, i.e. export, wholesale, etc..

This data is considered to be very accurate, and from a grower level is estimated to cover all but approximately 2% of production.

ECONOMIC/PROFITABILITY ANALYSIS

In 1998 the ABA hired a consultant to conduct an economic/profitability analysis to estimate profitability at an individual farm level, which is currently (2006) being updated. The analysis benchmarked the profitability of three different sized farms. The assessment included at least partial information on the following:

- Production;
- Price;
- Costs of production; and
- Capital costs.

4.1.2 Apple and Pear Australia Limited

APPLE AND PEAR SURVEY

APAL funds the Apple and Pear Survey which is conducted annually by the ABS. This "survey" is actually a census of all apple and pear farms with an EVAO of more than \$5,000 and complements the ABS' Agricultural Survey. The results of the survey are reported in the ABS publication entitled "Agricultural Survey, Apples and Pears, Australia", catalogue number 7111.0.55.002.

WELL INFORMED GROWER PROJECT

The Australian Fresh Fruit Company (AFFCO) manages the 'Well Informed Grower' project, which is facilitated by HAL in partnership with APAL. The project is part of an initiative to improve the collation and dissemination of production and marketing information in the apple industry. The Well Informed Grower project involves the active participation of around 25 grower/ packer/ marketers, representing more than half the Australian apple crop. Information collected and disseminated as part of this project includes:

- Fortnightly updates from all major growing regions on:
 - o Seasonal conditions;
 - o Harvest updates;
 - o Crop volumes; and
 - o Stock figures.
- Weekly competitive product updates. As an example banana supply and pricing data has been collected and communicated to industry. Seasonal products, such as summerfruit, grapes and mandarins have also been periodically monitored and reported as part of this project.
- Apple pricing data, including sales achieved with supermarkets and wholesalers, as well as weekly wholesale market prices.
- Weekly retail price reports, using benchmark supermarkets and independent green grocer stores in Sydney and Melbourne. Prices are monitored for apples, pears and key competitive products.

COOL STORE STOCK DATA

APAL collect data from key cool stores on stock levels every month. While this information is not collected from all cool stores, by collecting from the key/major cool stores this information is considered to be a reasonably accurate representation of trends in stock levels. This information is disseminated to industry by APAL, and has been used as an input to the "Well Informed Grower" project.

MARKET PRICE DATA

Another outcome of the Well Informed Grower project has been the collection of retail and wholesale price data for apples and pears, as well as some selected competitor fruits such as bananas and summerfruit. This information is disseminated to industry in weekly/fortnightly reports. FRESH*logic* also supply this information in the FRESH*logic* Apple and Pear Market Monitor (see **Section 5.1**).

APAL PRODUCTIVITY & EFFICIENCY ANALYSIS

APAL, in a research project part funded by DAFF, examined the productivity and efficiency at the farm level for apples and pears. This research included information on the costs of production which can be used for benchmarking purposes. Most operating costs are included, such as:

- Planting;
- Spraying;
- Harvesting;
- Sorting; and
- Packing.

Some capital costs are also included, such as the cost of netting and pack-house infrastructure, but the analysis does not include the cost of land or irrigation.

4.1.3 Australian Asparagus Council

EXPORT COMPANY DATA

There are two major companies in Australia that export asparagus, accounting for close to all Australian asparagus exports. These two companies maintain records of export:

- Volume;
- Value; and
- Destination.

This data is periodically provided to the Australian Asparagus Council (AAC).

4.1.4 Australian Banana Growers Council

ABGC TRANSPORT VOLUME DATA

Banana production data is collected by the Australian Banana Growers Council (ABGC) from transport company manifests that are supplied by the transport companies to ABGC on a weekly basis. This information is compiled to produce weekly production reports which are available on the ABGC website.

CROP FORECASTING SYSTEM

This Growcom project is funded through HAL and is currently being implemented by the ABGC. The crop forecasting system is used to derive production forecasts at the beginning of each season. Information on the number of bells per tree is provided by growers, which is used by the crop forecasting system to forecast the timing and quantity of bananas produced during each season, in order to provide an indication of when peak supply periods for bananas will be.

This system has only recently been introduced and, currently, only a small proportion of growers are using the system.

4.1.5 Australian Citrus Growers

The Australian Citrus Growers (ACG) report production, export and import volumes in their annual report, while forecasts for the coming year are also generally available by March of the current year. The data is sourced from consultation with members and augmented by secondary data sourced from the ABS.

NATIONAL PLANTINGS DATABASE

A database has been developed to record data on citrus plantings compiled from a comprehensive survey of Australian citrus growers and utilising GIS capability. The first stage of this project was to undertake aerial photography of every farm in order to obtain a snapshot of the number of trees planted, age and plant arrangement. This was followed by surveys of growers to capture the:

- Number of trees planted by:
 - o Variety; and
 - o Age.
- Management techniques:
 - o Irrigation;
 - o Plant arrangement;
 - o Cropping; and
 - o Root stock.

This information is updated on an ongoing basis. The ACG has provided portable computers to participating growers to input data regarding their operations which facilitates the updating of the database.

At the beginning of each season a sample of farms are inspected to obtain indicative information regarding fruit counts, size and density per tree. Combined with the plantings

information stored in the database, this is used to produce production forecasts for the upcoming season. These forecasts are then updated on a continuous basis with actual production figures.

This database is expected to be used as a tool for both strategic industry planning and individual farm management.

INTERNET DISPATCH SYSTEM

The ACG are currently developing an 'Internet Dispatch System', which will be used to collect production and market information from packers. The system will be similar in concept to the Internet Dispatch System operated by Avocados Australia.

The ACG envisage that information from the National Plantings Database, as well as additional market information, will also be made available to members of the supply chain through the Internet Dispatch System.

REGIONAL CITRUS ORGANISATION DATA (PRODUCTION AND PRICE)

The regional citrus organisations, such as the Murray Valley Citrus Board and Riverina Citrus, collect information from growers, packers, processors, marketers and exporters to assist in updating the National Plantings Database on an ongoing basis. This information is provided voluntarily by the growers, packers, processors, marketers and exporters.

4.1.6 Australian Custard Apple Growers Association

ACAGA INDUSTRY DATABASE

As part of their annual membership renewal form, the Australian Custard Apple Growers Association (ACAGA) collect the following information from members:

- Tree numbers;
- Age of trees;
- Annual production; and
- Market distribution.

The ACAGA also conduct phone surveys of non-members on a biennial basis, collecting the same information. Non-members typically provide information on tree numbers and markets, and the ACAGA estimate production of non-members based on tree numbers and expected yields. Anecdotal evidence indicates that ACAGA production estimates are slightly below levy figures.

MARKETING RETURN GROUP

The Marketing Return Group is comprised of approximately 30 of the 250 total custard apple growers in Australia. They collect and provide farm gate sales data to the ACAGA via the Australian Tropical Fruits Dispatch Portal electronic dispatch system, which is then disseminated to growers. Information collected includes:

- Prices received by:
 - Volume; and
 - Quality.

4.1.7 Australian Dried Fruits Association

PROCESSOR DATA

The dried fruit industry has two major processors (Sunbeam and Clyne Foods), who between them purchase approximately 95% of all fruit produced in Australia for drying. These processors maintains records of:

- Production;
- Price (both at the farm gate and post processing); and
- Market distribution.

These records are currently kept confidential, although Sunbeam and Clyne Foods do publicly release a pricing schedule in late January each year providing a reference guide of price by quality for each season.

4.1.8 Australian Garlic Industry Association

ANNUAL DATABANK UPDATE

The Australian Garlic Industry Association (AGIA) conduct an annual survey of all member growers requesting data on:

- Number of plants by variety; and
- Production.

The results of this survey are considered to be highly unreliable as an actual estimate of industry production for the following reasons:

- The survey has a very low response rate; and
- Only members are surveyed, and a large proportion of growers in the industry are not members.

4.1.9 Australian Macadamia Society

AMS GROWER SURVEY

The Australian Macadamia Society (AMS) conduct a biennial survey of growers requesting the following plantings information:

- Tree numbers;
- Variety; and
- Age.

The survey has an average response rate of approximately 70%. Between surveys this information is augmented by data collected from nurseries regarding plant sales, in order to produce more up-to-date estimates on tree numbers.

This data, in conjunction with seasonal and climate data, is used to produce industry production forecasts.

MACMAN

The AMS has developed a software program, MacMan, for use by Macadamia growers that record a wide range of farm management data, including production data such as:

- Plantings;
- Tree growth;
- Harvest yields; and
- Value.

Cost of production data can also be inputted into the MacMan software, including:

- Fertiliser and pesticide use;
- Employees;
- Dehusking and sorting; and
- Storage management.

MacMan also enables growers to trace their nuts from the orchard through to the processor. Anecdotal evidence suggests that approximately 20% of macadamia growers are currently using MacMan.

Several reports have been developed as part of the software that enables growers to summarise and compare the performance and cost of production of different parts of their farms.

PROCESSOR DATA

The macadamia industry is a relatively small industry, with nearly all macadamias produced having to be sold to a small number of processors. It is estimated that these processors combined purchase approximately 99% of all macadamias produced in Australia.

The majority of macadamias are sold to processors under one year contracts, with the records held by the processors. However, this data is confidential and is not currently publicly available.

4.1.10 Australian Mango Industry Association

PROJECT MG04004

The Australian Mango Industry Association (AMIA), as part of Project MG04004 being conducted by the Queensland Department of Primary Industries and Fisheries, part funded (in conjunction with HAL) a survey of mango farmers to collect quantitative data on current production management practices, attitudinal responses to various management practices and some statistical data on tree planting, variety, yield, labour costs, etc. The survey is not expected to be conducted on an ongoing basis.

AMIA DAILY MARKET PRICE REPORT

The AMIA part fund a daily market price report collated by Ausmarket Consultants. The reports provide a summary of indicative price ranges by variety and quality for mangoes sold in markets in Sydney, Melbourne, Brisbane, Adelaide and Perth.

4.1.11 Australian Mushroom Growers

AMGA ANNUAL PRODUCTION SURVEY

The Australian Mushroom Growers Association (AMGA) conducts an annual survey of all known mushroom growers to capture the following productivity data:

- Production (tonnage);
- Spawning rate;
- Yield (kilograms of mushrooms per sqm);
- Crops per shed;
- Cropping rate; and
- Picking rate.

The ABS and HAL recognise the survey as providing accurate estimates of production. The findings of the report are summarised in an annual report entitled "The State of the Australian Mushroom Industry".

4.1.12 Australian Onion Industry Association

STOCK SURVEY

The Australian Onion Industry Association (AOIA) collects data from growers on a tri-annual basis. This information is collected through a survey of all known growers before each of the AOIA grower meetings. Information collected includes:

- Tonnes of onions stored;
- Tonnes of onions harvested; and
- Hectares of onions planted.

The results of these surveys are disseminated to members at each of the three grower meetings during the year, but are not made publicly available.

4.1.13 Australian Papaya Industry Association

GROWER SURVEY

The Australian Papaya Industry Association (APIA) conduct an annual survey of growers requesting information on the area planted. This survey has a very low response rate and as such the information is considered to not be representative of the industry.

GROWER ANALYSIS

The APIA, in association with the Queensland Department of Primary Industries, undertake a benchmark farm level economic analysis every two years. Cost of production information is collected from growers at grower meetings, including:

- Production inputs;
- Harvesting;
- Marketing; and
- Freight.

Growers are also asked to provide production and value information, however some growers prefer to not make this information available.

4.1.14 Australian Passionfruit Industry Association Inc.

ROYALTIES SCHEME

The Australian Passionfruit Industry Association Inc. (APIAI) is paid a voluntary royalty for every passionfruit plant sold to growers for commercial production. This provides an indication of the number of plants in the ground. However, no data is collected regarding the number of plants that are removed from the ground and thus is not considered by the APIAI to be an accurate indicator for estimating production.

4.1.15 Australian Processing Tomatoes Research Council

PROCESSOR DATA

The Australian processing tomato industry is a small industry, with all processing tomatoes produced sold to one of two major processors. The processors maintain records of:

- Production;
- Price (both at the farm gate and post processing); and
- Market distribution.

Production information is provided to the Australian Processing Tomatoes Research Council (APTRC). This data is considered to be very accurate, and from a grower level covers the entire production of processing tomatoes.

GROWER INTERVIEWS

The APTRC conducts face-to-face interviews of all growers in the industry on an annual basis to obtain information on:

- Hectares planted by; and
- Variety.

INDUSTRY SURVEY

The APTRC conduct an annual survey of growers requesting information on yields. This survey has only recently been restarted following a period of three years in the early 2000s where the survey was not run.

PAYMENT SCHEME

A payment scheme is in place that sets the price that growers will receive for certain quality levels of product.

COST OF PRODUCTION DATA

The APTRC have collected information from industry regarding the quantity of diesel and water required to produce processing tomatoes. The APTRC also has estimates of other costs of production (operational and capital) based on informal discussions with growers.

4.1.16 Australian Rubus Growers Association

MEMBERS SURVEY

The Australian Rubus Growers Association (ARGA) conduct a periodic survey of members to collect information regarding the number of acres of production. The most recent survey was conducted in 2004, with the previous survey conducted between 1994 and 1996.

PROFIT MARGIN ANALYSIS

The ARGA have conducted profit margin analyses for a number of their members. Operating and capital costs were collected by an economist from all growers attending a grower meeting run by the ARGA in 2005. This information was used to develop a tool that enables growers to calculate their own profit margins. This may be used for benchmarking purposes in the future.

4.1.17 Australian Walnut Industry Association

MEMBERSHIP APPLICATION / RENEWAL

The Australian Walnut Industry Association (AWIA) request information regarding the number of trees planted by variety in their annual membership application / renewal forms.

MEMBER SURVEY

The AWIA conducted a survey of member growers approximately 5 to 6 years ago requesting information regarding:

- Tonnes of product sold;
- Prices received; and
- The market in which the product was sold.

This survey received a very low response rate and has not been undertaken since.

4.1.18 Avocados Australia

INTERNET DISPATCH SYSTEM

Avocados Australia have recently developed an 'Internet Dispatch System', which is used to collect production and market information. The system collects and disseminates the following information:

- **Dispatch data.** Data is collected on the quantity of product sent to market by market channel;
- **Four week rolling production estimate.** Production data is updated weekly and a four week rolling estimate is assessed;
- **Fifteen month production forecasts.** Monthly forecasts are developed by the contributors to the system (with assistance from Avocados Australia where required) for the next 15 month period.

The contributors to the system (those that provide the data to the system) are whomever places the product on the market, which can be either grower-packers, packers or marketing agents. Anecdotal evidence suggests that approximately 85% of total production is currently captured by the Internet Dispatch System.

4.1.19 Canned Fruit Industry Council of Australia

PROCESSOR DATA

The canned fruit industry has one major processor (SPC Ardmona), accounting for almost all canned fruit production in Australia. SPC Ardmona maintains records of:

- Production;
- Price (both at the farm gate and post processing); and
- Market distribution.

Some of this data is provided to the Canned Fruit Industry Council of Australia (CFICA) periodically to assist in strategic industry planning, but otherwise these records remain confidential¹.

4.1.20 Chestnut Growers of Australia

MEMBERSHIP APPLICATION / RENEWAL

The Chestnut Growers of Australia (CGA) request information regarding the number of trees planted by variety and age in their annual membership application / renewal forms. The CGA have less than one third of total growers as members thus only a small sample of growers are surveyed. Further, only a small proportion of members complete this section of the membership form.

BREAKEVEN ANALYSIS

In 1999 the CGA conducted a breakeven analysis at an individual farm level, with information used collected through consultation with growers. The analysis included information on the following:

- Production;
- Price;
- Costs of production, including:
 - o Marking out;
 - o Herbicides;
 - o Ripping;
 - o Liming;
 - o Planting;
 - o Seeding;
 - o Mowing;
 - o Mulching;
 - o Harvesting; and
- Capital costs, including:
 - o Irrigation;
 - o Shed;
 - o Grader; and
 - o Cool room.

4.1.21 Growcom

STATE LEVY

Between 1923 and 2003 Queensland Fruit and Vegetable Growers (QFVG) operated under a statutory arrangement that directed that all commercial producers of fruit and vegetables in Queensland were compulsory members of QFVG and, accordingly, had to pay compulsory levies. This statute was abolished in 2003, and QFVG have since rebranded to become Growcom.

The state levy in place under the statute was based on value of production. Levies were collected from the wholesale level, however, wholesalers were not required to verify the accuracy of the data they provided. Anecdotal evidence suggests that the data obtained from the state levy was not accurate.

¹ It should be noted that Growcom, not the CFICA, are the PIB for pineapples, including canned pineapples.

CROP FORECASTING SYSTEM

This Growcom project is funded through HAL and is currently being implemented by the ABGC. The crop forecasting system is used to derive production forecasts at the beginning of each season. Information on the number of bells per tree is provided by growers, which is used by the crop forecasting system to forecast the timing and quantity of bananas produced during each season, in order to provide an indication of when peak supply periods for bananas will be.

This system has only recently been introduced and, currently, only a small proportion of growers are using the system.

BANANA PRODUCTION AND PRICE DATA

The QFVG (now Growcom) collected production and price data from growers and wholesalers, however this has ceased since the rebranding to Growcom. This data was disseminated to growers on a weekly or monthly basis. Growcom are investigating options for restarting this data collection for the banana industry.

4.1.22Nursery and Garden Industry Australia

RETAILWORKS MARKET MONITOR

The Nursery and Garden Industry Australia (NGIA) funds a biannual Market Monitor report produced by RETAILworks. See **Section 5.2** for further details.

4.1.23Persimmon Industry Association

MEMBERSHIP APPLICATION / RENEWAL

The Persimmon Industry Association (PIA) has recently begun requesting information regarding the area planted to persimmons on their annual membership application / renewal forms. However, the PIA believes that less than half the growers in the persimmon industry are currently members.

4.1.24Pistachio Growers Association

AUSTRALIAN PIONEER PISTACHIO COMPANY DATA

The Australian Pioneer Pistachio Company (APPC) is the sole packing company in the pistachio industry and account for approximately 99% of total pistachio production in Australia. APPC maintains records of:

- Production;
- Price (both at the farm gate and post packaging / processing); and
- Market distribution.

APPC is a central capture point for production and price data. APPC provide production and value data to the Pistachio Growers Association (PGA) on an annual basis at the end of each season.

ECONOMIC ANALYSIS

An economic analysis was conducted in the mid-1990s that assessed costs of production in the pistachio industry. It is not known who conducted this analysis, but anecdotal evidence suggests that it was considered accurate by industry at the time.

Cost of production data contained in the analysis included:

- Planting;
- Spraying;
- Pruning;
- Harvesting;
- Mulching;
- Fertiliser; and
- Crop management.

The analyses also contain information on infrastructure costs.

4.1.25 Summerfruit Australia

FRESHLOGIC MARKET MONITOR

Summerfruit Australia Limited (SAL) fund a weekly Market Monitor compiled by FRESHlogic. The following data is collected by FRESHlogic on a weekly basis from members of the supply chain:

- Retail prices;
- Consumer advertising;
- Weather patterns;
- Activity from competing products;
- Availability;
- Quality; and
- Trading data.

The FRESHlogic program then processes this data into outputs that can be used by the industry to improve supply chain efficiency and management of the summerfruit category.

A summary of the findings for each season are published in the annual industry report.

4.2 Secondary Data Sources

Some examples of secondary uses and reporting of the primary data examined in the previous sections includes:

- **Australian Banana Growers Council.** The Australian Banana Growers Council (ABGC) provides industry data on production, value and trade using data sourced from a variety of State Government and Industry Bodies, such as Growcom, the South Australian Banana Promotions Committee, the Chamber of Fruit and Vegetables Industries, the Association of Australian Banana Wholesalers, the Food and Agriculture Organisation (FAO) and the Northern Territory Department of Primary Industries and Fisheries;
- **Australian Macadamia Society.** The Australian Macadamia Society publishes production data by region and export data by destination. Export data is sourced from the ABS, while production data is collected form a variety of sources including the ABS and industry surveys;
- **Australian Olive Association.** The Australian Olive Association (AOA) provides import and export data for olive oil and table olives at a national level, with all data sourced from the ABS;
- **Australian Vegetable and Potato Growers Federation.** The Australian Vegetable and Potato Growers Federation (AUSVEG) report production statistics for a variety of vegetables. This data is all secondary data, sourced from the ABS; and
- **Horticulture Australia Limited.** Horticulture Australian Limited (HAL) produces the annual Australian Horticulture Statistics Handbook, which reports statistics on horticulture production by commodity. Data is sourced primarily from the ABS.

4.3 Publically Available Data Not Identified

The following is a list of the PIBs for which publicly available data has not been identified through this project. It is important to note that this does not infer these bodies do not collect data, just that any data that is collected by these bodies has not been identified through consultation or desktop research:

- Australian Blueberry Growers Association;
- Australian Lychee Growers Association;
- Australian Nashi Growers Association;
- Australian Nut Industry Council;
- Australian Pecan Growers Association;

- Australian Prune Industry Association;
- Australian Table Grape Association;
- Botanical Resources Australia;
- Cherry Growers of Australia;
- Hazelnut Growers of Australia;
- Melon Association;
- Pineapples (Growcom, the PIB for pineapples, have identified the lack of statistics as a key issue for the industry);
- South Australian Dried Tree Fruits Association;
- Strawberries Australia; and
- Turf Producers Australia.

5. Business and Industry Data Sources

5.1 FRESHlogic

5.1.1 Market Monitor

FRESHlogic produce Market Monitors for two horticulture PIBs:

- Apple and Pear Australia Limited; and
- Summerfruit Australia.

FRESHlogic pools and processes data from all levels of the supply chain (through consultation), ABS statistics and industry reports. This information is used to profile market performance, trends and the implications for the relevant industry at the retail level. The Market Monitor is designed to inform the market and guide improved commercial decisions.

Summerfruit Australia publish the results of the Market Monitor in their annual report.

5.2 RETAILWorks

5.2.1 Market Monitor

The Nursery and Garden Industry Australia (NGIA) funds a biannual Market Monitor report produced by RETAILworks that disseminates national statistics on:

- Production;
- Value;
- The distribution / supply chain; and
- Market drivers, such as:
 - Design and décor trends;
 - Housing;
 - Water restrictions;
 - Garden media;
 - Weekend weather;
 - Gardening skills; and
 - Petrol prices.

Data is obtained from all sectors of the industry including growers, wholesalers, retailers, garden maintenance, and landscapers. Data is provided on a regular basis and captured through interviews by RETAILworks. Data is also obtained from conventional sources like the ABS and from other garden industry consumer studies.

The Market Monitor covers both nurseries and cultivated turf, although cut flowers are excluded. RETAILWorks estimates the retail value of greenlife production and then discounts back to the wholesale level using industry based estimates of marketing margins. Using this approach, the estimates of GVP of wholesale level greenlife developed by RETAILworks are actually significantly larger than the corresponding ABS estimates for nurseries and cultivated turf combined.

5.3 AC Nielsen

5.3.1 ScanTrack

AC Nielsen collects scanner-based marketing and sales information, gathered weekly from a large sample of retail stores. This data provides tracking information at multiple levels ranging from category-level total outlet sales volume and prices to single item performance in one market. By tracking and forecasting non-promoted as well as promotional product movement, AC Nielsen ScanTrack allows for:

- Monitoring performance trends;
- Evaluating price competitiveness; and
- Evaluating promotion effectiveness.

Data can be obtained by:

- Product;
- Brand;
- Location;
- Retail chain; and/or
- Category.

5.4 Synovate AZTEC

5.4.1 Scan Data

Synovate AZTEC collects scanner-based sales data across the grocery, pharmacy, liquor, mass merchant and petrol / convenience channels. Synovate AZTEC act on behalf of Woolworths Supermarkets in the sale of their scan data, which can be used to track product information at a State through to single or cluster store level. Scan data is also collected from a range of other retail outlets. This information allows clients to:

- Monitor product performance;
- Understand sales drivers of products;
- Evaluate the impact of product launches;
- Obtain insight into consumer purchasing characteristics and drivers;
- Evaluate the impacts of promotional activities;
- Identify target consumer groups.

5.5 Ausmarket Consultants

5.5.1 Fruit & Vegetable Market Price Data

Ausmarket Consultants collect daily wholesale price data for all fruit and vegetable commodities sold through wholesale markets in the major capital cities of Sydney, Melbourne, Brisbane, Adelaide and Perth. For a fee, Ausmarket consultants can publish reports providing indicative price ranges achieved in each of the major capital cities by variety and quality for each commodity.

6. International Data Sources

6.1 Food and Agriculture Organisation of the United Nations

The Food and Agriculture Organisation of the United Nations (FAO) collects food and agriculture statistics from around the world. These statistics can be retrieved from their online database, FAOSTAT, which has over 3 million time-series records from over 210 countries and territories covering statistics on agriculture, nutrition, fisheries, forestry, food aid, land use and population. Data is compiled from the relevant national authorities and reported at the national level. FAOSTAT has annual data for the following sets of information for each country:

- Production;
- Area harvested;
- Yield;
- Producer price (i.e. farm gate);
- Consumption;
- Export volume;
- Export value;
- Import volume;
- Import value; and
- Net export volume.

In 2005, the FAOSTAT database provided production data on the following horticulture commodities for Australia:

- Alfalfa for forage and silage;
- Almonds, with shell;
- Apples;
- Apricots;
- Asparagus;
- Avocados;
- Bananas;
- Beans, dry;
- Beans, green;
- Broad beans, horse beans, dry;
- Cabbages and other brassicas;
- Canary seed;
- Carrots and turnips;
- Cauliflowers and broccoli;
- Cherries;
- Chick peas;
- Chillies and peppers, green;
- Citrus fruit, nec;
- Coconut (copra) oil;
- Cucumbers and gherkins;
- Currants;
- Figs;
- Fruit, nec;
- Grapefruit (inc. pomelos);
- Grapes;
- Groundnut oil;
- Groundnuts, with shell;
- Guavas, mangoes, mangosteens;
- Hops;
- Kiwi fruit;
- Lemons and limes;
- Lentils;
- Lettuce and chicory;
- Linseed;
- Linseed oil;
- Lupins;
- Mushrooms and truffles;
- Mustard oil;
- Mustard seed;
- Nuts, nec;
- Olive oil, virgin;
- Olives;
- Onions, dry;
- Oranges;
- Other melons (including cantaloupes);
- Papayas;
- Peaches and nectarines;
- Pears;
- Peas, dry;
- Peas, green;
- Persimmons;
- Pineapples;
- Plums and sloes;
- Potatoes;
- Pumpkins, squash and gourds;
- Raisins;
- Rapeseed;
- Rapeseed oil;
- Raspberries and other berries;
- Safflower oil;
- Safflower seed;
- Sesame oil;
- Soybean oil;
- Soybeans;
- Spinach;
- Strawberries;
- Sunflower oil;
- Sunflower seed;
- Sweet potatoes;
- Tangerines, mandarins, clemantines;
- Tobacco, unmanufactured;
- Tomatoes;
- Vegetables, nec;
- Walnuts, with shell; and
- Watermelons.

The FAOSTAT database also has production data sets for the following horticulture commodities that were not reported for Australia in 2005:

- Anise, badian, fennel and coriander;
- Areca nuts;
- Artichokes;
- Bambara beans;
- Brazil nuts, with shell;
- Carobs;
- Cashew nuts, with shell;
- Cashewapple;
- Castor oil seed;
- Chestnuts;
- Chicory roots;
- Chillies and peppers, dry;
- Cinnamon (canella);
- Clover for forage and silage;
- Cloves;
- Cocoa beans;
- Coconuts;
- Coffee, green;
- Copra;
- Cow peas, dry;
- Cranberries, blueberries;
- Dates;
- Eggplants (aubergines);
- Flax fibre and tow;
- Garlic;
- Ginger;
- Gooseberries;
- Hazelnuts (with shell);
- Kola nuts;
- Leeks, other alliaceous vegetables;
- Leguminous vegetables nec;
- Maté;
- Melonseed;
- Nutmeg, mace and cardamoms;
- Oil palm fruit;
- Oilseeds;
- Okra;
- Onions (including shallots), green;
- Palm kernel oil;
- Palm kernels;
- Palm oil;
- Pepper (piper spp.)
- Pigeon peas;
- Pistachios;
- Plantains;
- Pome fruit nec;
- Poppy oil;
- Poppy seed;
- Pulses nec;
- Quinces;
- Roots and tubers nec;
- Sesame seed;
- Sour cherries;
- Spices nec;
- Stone fruit nec;
- String beans;
- Taro (cocoyam);
- Tea;
- Vanilla;
- Vegetable fats and oils nec;
- Vetches;
- Yams; and
- Yautia (cocoyam).

6.2 International Government Departments and Agencies

As is the case in Australia, most countries collect primary trade data to the six digit HS commodity code level. This primary information can be accessed from the relevant government department or agency of the country. Some agencies, such as the Food and Agriculture Organisation of the United Nations (FAO), the United Nations' Statistics Division (UNSD) and the Organisation for Economic Cooperation and Development (OECD), collect this data from the relevant international government departments and agencies and store it in their publicly available trade databases.

6.3 International Trade Centre

The International Trade Centre (ITC) collects statistics on commodity imports and exports by country. All data is sourced from COMTRADE, which is maintained by the United Nations' Statistics Division (see **Section 6.6**).

6.4 Organisation for Economic Cooperation and Development

The OECD collects production, value and trade statistics of major agricultural commodities by country and uses these statistics to produce production and trade forecasts. The OECD only collects data for a few horticultural commodities, these being:

- Oilseeds;
- Oilseed oils;
- Oilseed meals;
- Rapeseed;
- Sunflower seed; and
- Vegetable oils.

All data is sourced from the relevant national authorities.

6.5 United States Department of Agriculture Foreign Agricultural Service

The United States Department of Agriculture (USDA) Foreign Agricultural Service (FAS) compiles production, supply and distribution data for a wide range of internationally traded agricultural commodities in all their forms, including fresh, frozen and canned, from all over the world in its Production, Supply and Distribution (PSD) database. PSD data are determined after analysing all overseas reports and drawing on additional sources, including more than 1,500 documents received from private and public sources around the world, global weather information, and satellite imagery analysis. After this analysis, official USDA data are released in USDA's World Agricultural Supply and Demand Estimates monthly report and in the FAS' World Production, Market, and Trade reports.

To assist in the dissemination of critical agricultural knowledge to USDA decision makers and the public, the FAS has developed the Global Agriculture Information Network (GAIN). GAIN is a web-based system that allows users to search the FAS' database of overseas reports from 1995 to the present. Users can search reports by:

- Date range;
- Country;
- Commodity; or
- Key words in the title.

FAS overseas offices submit more than 3,000 reports per year, approximately half of which are scheduled periodic reports. The types of reports that can be viewed using GAIN include:

- **Trade Policy Reports.** Each September, FAS prepares "Food and Agricultural Import Regulations and Standards (FAIRS)" reports, which cover more than 40 major markets for U.S. products. FAS posts reports annually on export certificate requirements in all countries covered. They also provide frequent updates on changes in foreign policies affecting agricultural trade and developments in multilateral trade agreements, such as the WTO.
- **Commodity Reports.** FAS overseas offices provide information on international production, consumption, and trade of most commodities of interest to U.S. agricultural producers. Countries selected for scheduled periodic (e.g., annual, semi-annual, or monthly) commodity reporting are either major producers of, or major markets for, a specific commodity. Most annual and semi-annual reports contain production, supply, and distribution tables which provides a complete snapshot of the commodity situation, including trade, storage, and use data. It should be noted that production, supply, and distribution data contained in GAIN are not official USDA data, but represent estimates made by FAS attachés.
- **Market Reports.** Product Briefs provide an assessment of the market for specific products, including the size of the market, factors affecting demand for U.S. products, and market promotion opportunities. Exporter Guides provide basic information on marketing and exporting agricultural products to more than 75 countries. Market Research Reports analyse market distribution systems for various sectors, such as the:
 - o Food retail sector;
 - o Food processing sector; or
 - o Hotel, restaurant, and institutional sector.

6.6 United Nations' Statistics Division

The United Nations' Statistics Division (UNSD) maintains the Commodity Trade Statistics Database (COMTRADE), which collates data on world trade by commodity, separated by imports and exports. Over 140 reporter countries provide the UNSD with their annual international trade statistics data detailed by commodities and partner countries,

representing over 90 per cent of world trade. This data is subsequently transformed into a standard format with consistent coding and valuation, according to the:

- Harmonised Commodity Description and Coding System (HS Commodity Codes);
- Classification by Broad Economic Categories (BEC); and
- Standard International Trade Classification Revision 3 (SITC).

Data is compiled from national authorities and standardised before being stored in the COMTRADE database. All data is reported at the national level.

6.7 World Trade Organisation

The World Trade Organisation maintains a statistics database of trade data for a variety of commodities by country. Trade data is sourced from UNSD's COMTRADE database as well as the European Union's Eurostat database².

² The European Union (EU) collects agricultural data at a farm level from its Farm Structure Survey (FSS), which are carried out every two to three years to obtain sample data on the structure of agricultural holdings in the EU, in particular land use, livestock numbers and farm labour force. Most EU Member States are represented in the survey. Approximately every ten years the FSS is replaced by an Agricultural Census.

7. Data Needs

7.1 Production Data

7.1.1 Strengths

Key overarching strengths of the existing production data identified in the audit include:

- Most Australian horticulture commodities have annual production data captured through the ABS Agricultural Census and Survey, while many of the PIBs collect production data (although to varying degrees of detail and reliability);
- Most **major** Australian horticulture commodities (in terms of production) have relatively reliable estimates of annual production data through either the ABS or the respective PIB;
- Some horticulture industries have relatively few participants, and accurate production data can be obtained from a small number of central capture points (such as processors); and
- Some industries have a large range of production data collected, including:
 - o Tonnages;
 - o Trees/plants by:
 - Variety;
 - Age;
 - Planting arrangement; and
 - Management technique.
 - o New plantings;
 - o Plant/tree removals;
 - o Plant/seed sales; and
 - o Production area.This information is useful for historical production estimates as well as for forecasting future production.

7.1.2 Weaknesses

Key overarching weaknesses of the existing production data identified in the audit include:

- There is limited scope of commodity classification across all horticulture industries, with data for many smaller horticultural commodities either not captured or captured in aggregate with other commodities;
- Few production data sets account for seasonality in the industry, with data captured on an aggregate, annual basis;
- Few data sets have reliable information regarding the regionality of production;
- There is little consistency between horticulture industries regarding the manner in which data is collected and the type of data collected. This results from individual industries undertaking individual activities rather than working as an overarching industry;
- Most horticulture industries have a large number of industry participants, with many first points of sale. This makes obtaining production data a logistically challenging exercise for much of the horticulture sector; and
- Anecdotal evidence suggests that some growers provide misleading or inaccurate information for a number of reasons, including:
 - o Participants do not feel comfortable providing commercially sensitive information;
 - o Misunderstanding of the relevance of providing certain types of information;
 - o Distrust or dislike of the collection format used; and
 - o Property/farm manager time constraints.

7.1.3 Data Requirements

The following requirements have been identified during the audit for horticulture production data:

- Collection of production data for each individual horticulture commodity;
- Collection and/ or reporting of data at regular intervals throughout the year (i.e. weekly, monthly or quarterly) in order to assess seasonality and timing of production as appropriate;
- Collection and analysis of data at growing regional and sub-regional levels;
- Collection of first point of sale volume data by distribution and/ or market channel (i.e. wholesale, retail, farmers market, etc.);
- Increased collaboration and standardisation of collection methods between Commonwealth and State Government and PIB organisations and departments; and
- Cooperation and collaboration with industry participants in order to minimise the errors in data collection and maximise the efficiency of collection processes. Specifically, it is important to:
 - Identify central data capture points for each industry, such as processors, market agents, etc.; and
 - Demonstrate the benefits to industry participants of providing accurate data, in particular those involved at central capture points.

7.2 Price Data

7.2.1 Strengths

Key overarching strengths of the existing price data identified in the audit include:

- Farm-gate price data is collected by the ABS for all Australian horticulture commodities included in the Agricultural Census/ Survey for calculating GVP estimates. Some of the PIBs also collect price data, as do some independent private firms; and
- Some horticulture industries have relatively few participants, and accurate price data can be obtained from a small number of central capture points (such as processors or wholesalers).

7.2.2 Weaknesses

Key overarching weaknesses of the existing price data identified in the audit include:

- Price data is usually collected at one or more points in time and used as an average for the year. This does not accurately account for seasonal fluctuations in price and the timing of transactions;
- Price data is usually captured from a few major markets. While a large share of sales is expected to be sold through these markets, for many horticulture commodities a considerable proportion is also sold in different markets (e.g. farmers markets, roadside sales, local markets, etc.);
- There is little consistency between horticulture commodities as to where price data is collected; and
- Most horticulture industries have a large number of industry participants, with a large and diverse number of first points of sale. This makes obtaining accurate and representative farm-gate price data a logistically challenging exercise.

7.2.3 Data Requirements

The following requirements have been identified during the audit for horticulture price data:

- Collection of price data at regular intervals throughout the year (i.e. daily, weekly or monthly) to facilitate more accurate estimates of GVP;
- Collection of price data from a larger variety of markets. In conjunction with collection of first point of sale volume data, this will provide a more accurate estimate of GVP;
- Increased collaboration and standardisation of collection methods between Commonwealth and State Government and PIB organisations and departments; and
- Cooperation and collaboration with industry participants in order to minimise the errors in data collection and maximise the efficiency of collection processes. Specifically, it is important to:
 - Identify central data capture points for each industry, such as processors, market agents, etc.; and
 - Demonstrate the benefits to industry participants of providing accurate data, in particular those involved at central capture points.

7.3 Cost of Production

7.3.1 Strengths

Key overarching strengths of the existing cost of production data identified in the audit include:

- Cost of production data at the farm level is typically captured for some industries through industry specific studies conducted by RIRDC or the relevant State Government departments. The PIBs of some industries have also undertaken economic or gross margin analyses; and
- Most of these analyses can be useful for benchmarking purposes.

7.3.2 Weaknesses

Key overarching weaknesses of the existing cost of production data identified in the audit include:

- There is a lack of coordination between Commonwealth and State Government departments, as well as PIBs, with cost of production data for some horticulture industries duplicated by different departments and agencies, while other industries have no data collection processes in place;
- Anecdotal evidence suggests that costs of production vary significantly between regions, crops and management practices, which is generally not reflected in the analyses conducted as they typically use a small sample of farms to provide detailed and confidential data;
- The types of cost of production data collected between industries can vary significantly, as does the manner in which its collected, making comparisons between studies and industries difficult;
- Many crops, such as stone fruit, are often grown in cross-crop farms (i.e. farms with more than one commodity). Most analyses do not take this into consideration, making the analysis and distribution of fixed and capital costs difficult to identify; and
- Few analyses are updated frequently. With production and management techniques changing considerably in some horticulture industries, this can mean that the cost of production information provided in many cases is no longer applicable.

7.3.3 Data Requirements

The following requirements have been identified during the audit for horticulture cost of production data:

- Greater collaboration and standardisation of data collection methods between Commonwealth and State Governments, PIBs and industry;
- Assessment of variance in costs of production between regions and management practices;
- Standardisation between industries of the types of costs of production to be included in analyses, as well as the collection method; and
- Regular updates of cost of production data.

7.4 Capital Costs

7.4.1 Strengths

Key overarching strengths of the existing capital cost data identified in the audit include:

- Capital cost investment data for some horticulture industries is captured primarily through analyses conducted by the RIRDC, the relevant State Government department, or PIBs; and
- Most economic analyses contain some useful benchmarks on costs for a variety of critical infrastructure.

7.4.2 Weaknesses

Key overarching weaknesses of the existing capital cost data identified in the audit include:

- There is a lack of coordination between Commonwealth and State Government departments, as well as PIBs, with capital cost data for some horticulture industries duplicated by different departments and agencies, while other industries have no data collection processes in place;
- The type of capital cost data collected between industries can vary significantly, as does the manner in which its collected, making comparisons between studies and industries difficult;
- Few analyses are updated frequently. With technologies changing considerably in some horticulture industries, this can mean that the capital cost information provided in many cases is no longer applicable.

7.4.3 Data Requirements

The following requirements have been identified during the audit for horticulture capital cost data:

- Greater collaboration and standardisation between Commonwealth and State Governments, PIBs and industry;
- Standardisation of the types of capital costs to be included in analyses, as well as the collection method; and
- Regular updates of capital cost data.

7.5 Identified Industry Requirements

The following types of data were identified through consultation with PIBs as key data requirements for a number of horticulture industries:

- Comprehensive production data (for both historical production and forecasting purposes), including (where appropriate):
 - o Number of trees / plants in the ground by variety;
 - o Number of new plantings by variety each season;
 - o Number of trees / plants removed by variety each season;
 - o Age of trees / plants by variety; and
 - o Production per tree / plant;
- A comprehensive list of first point of sale data by growing region, providing accurate price versus production data;
- Comprehensive farm cost of production and capital cost data, including:
 - o Labour requirements during the season (particularly during harvest) and cost;
 - o Water usage / requirements and cost;
 - o Energy usage / requirements and cost;
 - o Other major inputs to production; and
 - o Infrastructure requirements and costs;
- Commodity price responsiveness to quality data;
- The names and contact details of existing growers and new entrants into the industry, as well as details of existing growers that have left the industry;
- Verify and validate data that is collected to ensure accuracy and consistency of reporting between collection points;
- More detailed export data than Customs currently provide, with many horticulture commodities aggregated with other like commodities or classified under "other";
- Quantity of product imported by variety and level of processing, as well as exporting country;
- Trends in global production and markets (for international competitor analysis and identifying potential export opportunities);
- Up-to-date information regarding market conditions and options available to growers;
- Detailed information regarding the split of product sold through different market channels (e.g. percent sold direct to wholesale, direct to retail, farmers market, etc.); and
- Consumer preferences and market research.

7.6 Summary

The following data requirements were identified following the assessment of the currently available data and consultation with industry:

- Collection of production data for each individual horticulture commodity, including:
 - o Number of trees / plants in the ground by variety;
 - o Number of new plantings by variety each season;
 - o Number of trees / plants removed by variety each season;
 - o Age of trees / plants by variety; and
 - o Production per tree / plant;
- Collection and/ or reporting of production and price data at regular intervals throughout the year (i.e. weekly, monthly or quarterly) in order to assess seasonality and timing of production as appropriate;

- Comprehensive cost of production and capital cost data;
- Collection and analysis of data at growing regional and sub-regional levels;
- Collection of first point of sale volume and price data by distribution and/ or market channel (i.e. wholesale, retail, farmers market, etc.);
- Increased collaboration and standardisation of the types of data collected and the data collection methods between Commonwealth and State Government and PIB organisations and departments;
- Cooperation and collaboration with industry participants in order to minimise the errors in data collection and maximise the efficiency of collection processes. Specifically, it is important to:
 - o Identify central data capture points for each industry, such as processors, market agents, etc.; and
 - o Demonstrate the benefits to industry participants of providing accurate data, in particular those involved at central capture points;
- Verify and validate data that is collected to ensure accuracy and consistency of reporting between collection points;
- Collection of import and export data by:
 - o Horticulture commodity;
 - o Variety;
 - o Level of processing; and
 - o Destination (for exports) or exporting country (for imports);
- Collection of information regarding trends in domestic and global production and market conditions (for competitor analysis and identifying potential market opportunities); and
- Collection of information on consumer preferences and market research.

8. Strategy

Goal: *To facilitate industry development, tactical and strategic industry planning through the improved collection, analysis and dissemination of information.*

Outcome: *Increased quality, consistency and standardisation of data, analysis and reporting across all horticulture industries, for the estimation of the gross value of production (GVP) as well as the strategic planning and development of individual industries and the wider horticulture sector.*

The following key activities have been identified as being critical in the delivery of the above goal of improved data collation and analysis for the horticulture sector.

- **Collaboration with existing organisations to coordinate and maximise the efficiency of existing data capture processes:** There are a number of independent data collation and analysis processes currently being undertaken across a range of horticulture industry sectors by State and Commonwealth agencies, PIBs and private industry organisations. The collaboration and coordination of activities to leverage existing resources will increase the efficiency and return on investment to all stakeholders of resources invested in data collation endeavours.
- **Standardisation of core industry data collected for across industry comparison:** The collation of a common data set of key parameters (production, price, seasonality, area planted, age of crop in ground, factors of production, number of growers and processors, etc) across all industry sectors will enable broader industry strategies and management arrangements to be implemented based on informed comparisons. This data would also serve to facilitate benchmarking analyses as appropriate and required in areas such as farm viability (exposure to crash point) the benefits from a marginal increase in production or adoption of improved technology, etc.
- **Development of new data collation processes to increase the quality of existing data:** Whilst there is a significant volume of available information it is of varying quality and regularity of publication, with some data highly accurate and other data having significant standard errors. The development of new data collation processes (most likely at points of central processing or handling) to fill identified data gaps and improve the quality of existing data would greatly increase the confidence and accuracy of the decision making process, based on that data.
- **Collation and management of data so that it may be readily analysed to respond to key industry issues:** The return from resources invested in data collation mechanisms is directly related to the ability of management bodies to efficiently and effectively respond to identified management issues, either strategic, responsive, long or short term. A regularly updated, centralised data storage and analysis system would greatly facilitate the responsiveness and accuracy of individual or across industry analyses as well as regular and consistent industry reports across all horticulture sectors. Detailed add ins could be developed within this framework as required.

There is significant commonality regarding the process for the delivery of the above key requirements. The following tables outline the two key strategies to be employed in the delivery of improved data and information, namely:

- **Engagement and consultation** to facilitate collaboration and partnerships; and
- **Development, implementation and management** of the data collation and management system.

The individual actions, responsibilities and expected resource requirements for the above strategies are outlined in the following pages.

8.1 Engagement & Consultation

Strategy & Actions	Responsibility & Partners	Timing	Mechanisms	Measure
<p>1. Inform and educate key stakeholders. Provide industry and key government and private sector organisations with balanced and objective information to assist in understanding the problems, opportunities and/or solutions.</p>	<ul style="list-style-type: none"> • HAL • PIBs • ABS • ABARE • DAFF • Private Sector Organisations 	Year 1	<ul style="list-style-type: none"> • Letter, email and phone contact 	<ul style="list-style-type: none"> • Number of PIB's actively engaged • Number of relevant private and public sector organisations actively engaged
<p>2. Consult and involve key stakeholders. Work directly with industry & organisations throughout the process to identify potential collaborative opportunities and benefits of providing this information. This stage needs to ensure that all concerns and aspirations are understood and considered with feedback obtained on proposed issues and/or solutions. Specifically, consult with PIBs and Industry Management Committee as well as private and government sector agencies to confirm the baseline data set to be collated on a consistent basis across all horticulture sectors.</p>	<ul style="list-style-type: none"> • HAL • PIBs • ABS • ABARE • DAFF • Private Sector Organisations 	Year 1 & 2	<ul style="list-style-type: none"> • Face to face meetings • Workshops with like organisations and stakeholders • Feedback mechanisms and reporting • Regular & consistent communication 	<ul style="list-style-type: none"> • Range of consistent opportunities by sector and stakeholder type
<p>3. Empower partner organisations in the decision making process. Partner with each organisation and include them in the selection of appropriate data collation mechanisms and procedures. Ultimately placing the final decision making responsibility onto the partner organisations (PIBs & Government agencies) to ensure ownership and support of the process.</p>	<ul style="list-style-type: none"> • HAL • PIBs • ABS • ABARE • DAFF • Private Sector Organisations 	Year 1 & 2	<ul style="list-style-type: none"> • Consultation & discussions ultimately resulting in a MOU between agencies, organisations and relevant PIB's 	<ul style="list-style-type: none"> • Formal stakeholder support regarding ongoing individual collaborative arrangements
<p>4. Collaborate with partner organisations to implement data collation and management systems. Partner with the relevant organisations to capture requisite data as per Action 3 in the Development and Implementation Strategy. Engage with relevant stakeholders regarding the opportunities and benefits related with making this information available. Address and identified confidentiality issues.</p>	<ul style="list-style-type: none"> • All relevant partners and industry sectors 	Ongoing	<ul style="list-style-type: none"> • Action MOU as per strategy and agreement 	<ul style="list-style-type: none"> • Regular report for each participating industry

8.2 Development, Implementation & Management of the Data Management System

Strategy & Actions	Responsibility & Partners	Timing	Mechanisms	Measure
<p>1. Develop data collation protocol and management system in consultation with key stakeholders.</p> <p>Design specification for and develop a relevant data management system. It is expected for ease of application and use across a range of sectors that a relational web-based database would be most suitable.</p> <p>Identify and develop new data collation processes (centralised data collection/ processing points, surveys, etc) as appropriate. This step should consider the marginal cost of additional information collation to ensure the efficiency of any additional data collation mechanisms.</p> <p>Identify the most efficient and effective means to collate consistent time series data for industry requirements across all horticulture sectors. Ideally this would be undertaken at a regional production base for aggregation to state and other relevant boundaries for analysis, reporting and lobbying.</p> <p>2. Validate all data and data sources.</p> <p>Validate data sources and process of collation to ensure systems developed provide accurate and applicable data on a repeatable basis. Validation, would ideally be undertaken on an annual process for all data sources, however, it is particularly important when developing and refining the initial data capture system/ process.</p>	<ul style="list-style-type: none"> • HAL • PIBs • ABS • ABARE • DAFF • Private Sector Organisations 	Year 3	<ul style="list-style-type: none"> • Engage specialist skills & expertise (in and/or not in-house) 	<ul style="list-style-type: none"> • Completion of design specification • Development and hosting of database
<p>3. Collaborate with partner organisations to implement data collation and management systems.</p> <p>Commence data collation in the format required for inclusion into the ultimate data management system (expected to be a relational database).</p>	<ul style="list-style-type: none"> • HAL • All relevant partners 	Year 3	<ul style="list-style-type: none"> • Collation of preliminary data via data collation mechanism • Testing and validation of data sets • Consultation with providers and analyst • Review and refinement of data collation process 	<ul style="list-style-type: none"> • Standard errors. • Explanatory variables
<p>4. Maintain ongoing contact with partner organisations to manage and ensure consistency of reporting and refine system.</p> <p>Work with partner organisations and data suppliers to refine and improve the data collation systems to minimise cost, maximise accuracy and ensure consistency of application.</p>	<ul style="list-style-type: none"> • HAL • PIBs • ABS • ABARE • DAFF • Private Sector Organisations 	Year 3-4 and ongoing	<ul style="list-style-type: none"> • Implement identified refined data collation mechanism by industry and data source 	<ul style="list-style-type: none"> • Population of database with initial data • Ongoing updates
	<ul style="list-style-type: none"> • HAL • All relevant partners 	Ongoing	<ul style="list-style-type: none"> • Review reporting base data collected and collation mechanism every 3-5 years and refine for further development 	<ul style="list-style-type: none"> • Findings of process review • Findings and feedback summary of consultation

Strategy & Actions	Responsibility & Partners	Timing	Mechanisms	Measure
<p>5. Develop reporting frameworks. Develop common reporting and analysis systems for the overall horticulture sector, relevant sub-sector groupings and individual commodities. Develop specific industry analysis and reporting procedures are required and made available.</p>	<ul style="list-style-type: none"> • HAL • All relevant partners and industry sectors 	Ongoing	<ul style="list-style-type: none"> • Develop preliminary reports • Review and refine • Develop final reports 	<ul style="list-style-type: none"> • Regular report for each participating industry

9. Appendix A: ABS GVP Data

9.1 Introduction

This chapter outlines the horticulture industries for which GVP data is currently available from the Australian Bureau of Statistics (ABS) Agricultural Census and Survey. Standard Errors (SE) have been calculated for each commodity with regard to Agricultural Survey data over the ten year period between 1993-94 and 2002-03. The lower the SE, the more reliable the data is considered to be for estimating actual GVP.

The following colour scheme has been used in the tables in this chapter for easy reference with regards to the integrity of the data for each industry.

Table 9.1: Colour Scheme for Standard Errors

Standard Error	Shading
Less than or equal to 25%	
Between 25% and 50%	
Greater than 50%	
No data available (N/a) ^(a)	

Note: (a) For industries listed as "N/a" it is not known whether this data is withheld due to confidentiality reasons or because no data exists.

It is apparent from the considerable number of shaded cells that the variance of GVP data by commodity at both the State and national level is significant. Nurseries appear to have the most consistent data at the national level.

Note: It is expected that the survey and sampling techniques used by the ABS under-represents the GVP for the majority of commodities.

9.2 Fruit and Nuts

Table 9.2: Average Standard Errors for Fruit and Nut GVP Data by State, 1993-94 to 2002-03

Industry	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
Grapes									
Grapes – Total Dried	9.9%	8.1%	50.0%	12.5%	16.6%	N/a	99.4%	100.0%	8.1%
Grapes – Table & Other ^(a)	5.1%	10.6%	11.3%	6.2%	15.4%	74.0%	28.2%	N/a	9.6%
<i>Total Grapes</i> ^(a)	4.6%	6.3%	11.4%	6.9%	15.2%	74.0%	28.2%	100.0%	6.2%
Citrus									
Oranges	7.0%	9.6%	6.8%	3.1%	6.1%	N/a	100.0%	N/a	4.7%
Grapefruit	20.4%	19.9%	24.8%	25.9%	31.8%	N/a	42.3%	N/a	18.8%
Lemons & Limes	9.2%	7.9%	12.8%	10.1%	11.7%	N/a	22.6%	N/a	5.7%
Mandarins	8.5%	5.5%	7.3%	9.6%	11.6%	N/a	38.1%	N/a	4.4%
Tangelos	43.6%	43.3%	57.7%	42.8%	43.8%	N/a	N/a	N/a	42.6%
Citrus Fruit n.e.c.	32.5%	47.5%	39.5%	43.3%	40.2%	N/a	70.6%	100.0%	33.1%
<i>Total Citrus</i>	6.7%	8.5%	6.5%	3.4%	7.4%	N/a	20.8%	100.0%	4.6%
Pome Fruit									
Apples	8.4%	6.4%	5.8%	7.8%	11.5%	12.2%	N/a	28.8%	6.1%
Pears (excl. Nashi)	8.1%	5.5%	6.6%	5.9%	11.7%	13.6%	N/a	48.1%	5.3%
Quinces	81.4%	56.5%	N/a	46.1%	67.3%	N/a	N/a	N/a	46.2%
Pome Fruit n.e.c.	70.2%	70.6%	70.7%	71.4%	55.7%	N/a	N/a	68.4%	69.6%
<i>Total Pome Fruit</i>	8.2%	4.5%	5.6%	6.9%	11.5%	12.1%	N/a	29.0%	5.4%
Stone Fruit									
Apricots	13.3%	13.9%	16.8%	9.7%	6.5%	18.4%	N/a	67.4%	5.9%
Cherries	13.9%	10.5%	53.1%	13.0%	11.9%	32.2%	N/a	N/a	13.2%
Peaches – Processing	18.0%	19.6%	41.9%	20.9%	34.3%	87.5%	N/a	N/a	18.6%
Peaches – Fresh	17.7%	21.0%	22.6%	20.1%	22.4%	47.6%	N/a	86.9%	18.1%
Plums	18.3%	27.3%	18.8%	22.4%	24.7%	46.3%	N/a	37.0%	22.0%
Prunes	19.0%	49.8%	67.3%	25.1%	55.3%	48.4%	N/a	N/a	17.5%
Avocados	18.2%	21.3%	9.9%	23.0%	11.1%	N/a	100.0%	N/a	10.4%
Carambola	N/a	N/a	42.5%	N/a	52.7%	N/a	20.2%	N/a	36.0%
Custard Apple	43.7%	N/a	41.7%	68.3%	70.7%	N/a	34.9%	N/a	42.2%
Dates	N/a	N/a	100.0%	N/a	N/a	N/a	19.4%	N/a	18.6%
Jack Fruit	64.9%	N/a	53.1%	N/a	64.1%	N/a	13.9%	N/a	21.8%

Industry	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
Figs	67.2%	54.2%	53.7%	67.5%	66.9%	N/a	63.6%	N/a	44.8%
Guava	51.2%	N/a	70.3%	N/a	100.0%	N/a	27.4%	N/a	45.5%
Loquats	65.6%	N/a	84.5%	51.6%	72.3%	N/a	N/a	N/a	53.7%
Lychees	46.5%	100.0%	42.0%	100.0%	N/a	N/a	N/a	N/a	41.5%
Mangoes	15.4%	N/a	5.7%	100.0%	13.2%	N/a	11.0%	N/a	5.8%
Nectarines	7.8%	15.9%	9.1%	8.8%	9.1%	26.3%	N/a	66.9%	9.2%
Olives	55.8%	35.3%	56.1%	31.9%	41.8%	74.7%	N/a	N/a	26.6%
Longans	100.0%	N/a	60.1%	100.0%	N/a	N/a	N/a	N/a	61.5%
Peacharines	N/a	100.0%	N/a	70.7%	N/a	N/a	N/a	N/a	70.5%
Persimmons	55.6%	45.0%	45.0%	46.7%	45.9%	N/a	N/a	N/a	43.6%
Rambutan	N/a	N/a	43.7%	N/a	N/a	N/a	22.8%	N/a	26.7%
Stone Fruit n.e.c.	80.5%	67.9%	85.8%	41.7%	56.8%	N/a	59.1%	N/a	36.9%
<i>Total Stone Fruit</i>	10.2%	15.9%	6.0%	6.5%	13.6%	28.3%	10.6%	58.4%	9.2%
Other Fruit and Berries									
Orchard Fruit n.e.c. & Nuts (Tas)	67.2%	68.5%	70.4%	67.2%	100.0%	87.5%	N/a	100.0%	99.9%
Orchard Fruit n.e.c.	42.7%	41.5%	50.9%	79.2%	40.4%	89.1%	48.5%	N/a	52.4%
Nashi Pears	15.0%	17.1%	39.7%	5.8%	14.4%	21.9%	N/a	79.8%	14.2%
Bananas	6.2%	N/a	12.0%	N/a	9.3%	N/a	19.5%	N/a	8.6%
Pineapples	58.5%	N/a	3.2%	N/a	N/a	N/a	57.4%	N/a	3.2%
Strawberries	11.2%	19.1%	12.0%	6.6%	8.4%	20.3%	N/a	52.6%	12.0%
Blackcurrants	66.8%	96.1%	N/a	88.7%	N/a	11.0%	N/a	N/a	11.2%
Blueberries	25.5%	23.7%	81.0%	73.5%	100.0%	45.9%	N/a	N/a	25.1%
Gooseberries	N/a	81.7%	53.2%	N/a	N/a	74.1%	N/a	N/a	51.4%
Raspberries	26.9%	25.3%	56.1%	32.0%	58.0%	15.9%	N/a	100.0%	19.8%
Berries – Other Small n.e.c.	67.2%	48.0%	66.9%	44.6%	86.7%	62.9%	N/a	N/a	48.1%
Kiwi Fruit / Zespri	8.3%	6.4%	11.1%	40.7%	13.6%	N/a	N/a	N/a	2.6%
Paw Paws / Papaya	41.5%	N/a	11.9%	N/a	32.4%	N/a	31.4%	N/a	11.4%
Passionfruit	44.6%	N/a	42.2%	100.0%	56.2%	N/a	N/a	N/a	42.4%
Rosella	100.0%	N/a	71.9%	N/a	N/a	N/a	N/a	N/a	73.3%
Other Tropical Fruit n.e.c.	100.0%	100.0%	69.7%	N/a	73.9%	N/a	N/a	N/a	54.7%
Other Fruit n.e.c.	53.1%	39.0%	41.9%	56.5%	59.2%	84.3%	78.1%	N/a	34.3%
<i>Total Other Fruit and Berries</i>	4.0%	11.1%	10.7%	21.9%	4.3%	21.1%	19.1%	50.0%	9.2%
Nuts									
Almonds	19.5%	5.2%	77.6%	7.9%	68.0%	100.0%	N/a	N/a	6.0%
Cashews (Shell Weight)	N/a	N/a	96.5%	N/a	100.0%	N/a	38.2%	N/a	42.1%
Chestnuts	48.0%	41.7%	N/a	45.6%	55.7%	N/a	N/a	N/a	41.9%
Filberts & Hazelnuts & Cobnuts	100.0%	59.7%	N/a	98.6%	100.0%	100.0%	N/a	N/a	59.7%
Macadamias	10.0%	N/a	8.2%	67.2%	56.1%	N/a	N/a	N/a	8.8%
Pecans	79.1%	72.0%	41.3%	69.7%	50.6%	N/a	N/a	N/a	48.2%
Pistachios	53.8%	48.7%	N/a	41.4%	69.0%	N/a	N/a	N/a	51.0%
Walnuts	57.6%	60.5%	N/a	52.6%	94.2%	77.2%	N/a	N/a	53.4%
Nuts n.e.c.	53.4%	67.2%	100.0%	99.1%	50.7%	76.0%	N/a	N/a	40.3%
<i>Total Nuts</i>	9.7%	5.4%	8.4%	7.7%	28.5%	67.1%	38.2%	N/a	8.5%
Total Fruit and Nuts	4.9%	6.2%	8.1%	4.3%	8.1%	11.6%	15.5%	26.7%	6.1%

Note: (a) Excludes wine.

Source: Australian Bureau of Statistics Agricultural Survey

9.3 Vegetables

Table 9.3: Average Standard Errors for Vegetable GVP Data by State, 1993-94 to 2002-03

Industry	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
Melons									
Melons – Rock & Cantaloupe	14.9%	6.6%	7.3%	19.2%	9.1%	N/a	23.2%	N/a	5.9%
Melons – Water	11.5%	25.5%	11.2%	22.0%	12.0%	N/a	29.8%	N/a	11.2%
Melons – Other	39.0%	28.5%	11.0%	54.3%	43.0%	100.0%	34.1%	N/a	21.5%
Melons – Bitter (Gourd)	N/a	N/a	98.6%	N/a	100.0%	N/a	21.2%	N/a	21.2%
<i>Total Melons</i>	14.4%	8.7%	6.2%	17.7%	12.0%	100.0%	11.9%	N/a	7.3%
Mushrooms									
Mushrooms	4.2%	5.7%	15.8%	8.9%	31.3%	15.3%	N/a	N/a	4.6%
<i>Total Mushrooms</i>	4.2%	5.7%	15.8%	8.9%	31.3%	15.3%	N/a	N/a	4.6%
Onions									
Onions – Brown & White	14.4%	10.8%	7.5%	7.5%	10.1%	6.1%	N/a	100.0%	6.0%
<i>Total Onions</i>	14.4%	10.8%	7.5%	7.5%	10.1%	6.1%	N/a	100.0%	6.0%

Industry	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
Other Vegetables									
Beans (French & Runner) - Processing	60.4%	30.8%	22.0%	61.7%	32.7%	18.9%	N/a	N/a	18.3%
Carrots	9.6%	7.3%	5.3%	9.3%	8.6%	17.9%	N/a	100.0%	6.4%
Cabbages	17.5%	12.9%	13.9%	13.3%	15.5%	14.1%	30.7%	N/a	13.1%
Brussel Sprouts	27.4%	15.4%	31.2%	12.1%	24.3%	17.2%	N/a	N/a	12.4%
Cauliflower	4.8%	4.1%	10.1%	6.8%	4.3%	5.0%	N/a	N/a	3.5%
Lettuce	15.8%	7.3%	8.0%	5.5%	10.8%	9.0%	19.9%	57.9%	7.2%
Asparagus	21.6%	17.5%	11.9%	51.0%	26.3%	44.7%	35.3%	N/a	11.1%
Beetroot	29.9%	27.7%	17.1%	22.6%	19.7%	94.1%	N/a	N/a	14.4%
Parsnips	22.0%	17.5%	52.4%	20.6%	15.4%	20.9%	N/a	N/a	15.0%
Pumpkins	8.1%	14.2%	10.6%	7.0%	9.2%	10.1%	9.7%	100.0%	7.6%
Sweet Corn	14.7%	14.5%	20.3%	18.6%	22.1%	54.0%	100.0%	N/a	14.5%
Sweet Potatoes	43.7%	N/a	28.9%	100.0%	33.1%	N/a	N/a	N/a	31.2%
Swedes	25.0%	22.5%	62.5%	13.7%	14.7%	14.2%	N/a	N/a	13.2%
Turnips (White)	99.6%	68.3%	69.1%	49.7%	79.5%	N/a	N/a	N/a	47.5%
Artichokes	76.5%	41.9%	66.7%	N/a	65.5%	100.0%	N/a	N/a	42.4%
Broad Beans	97.2%	97.2%	68.6%	100.0%	86.5%	54.0%	N/a	N/a	75.5%
Broccoli	14.2%	4.6%	9.2%	8.2%	11.8%	13.3%	N/a	53.6%	5.2%
Chinese Cabbage	28.3%	21.2%	17.9%	24.4%	18.9%	83.6%	100.0%	N/a	13.6%
Capsicums, Chillies & Peppers	14.6%	9.4%	10.6%	16.1%	11.0%	44.5%	23.4%	73.6%	7.1%
Celery	40.9%	14.2%	13.0%	18.9%	18.4%	14.5%	N/a	N/a	11.9%
Chokos	100.0%	N/a	45.1%	N/a	N/a	N/a	N/a	N/a	45.0%
Cucumbers	23.4%	24.5%	13.6%	19.9%	13.2%	26.7%	33.7%	100.0%	12.0%
Egg Plant (Aubergine)	57.0%	63.1%	49.1%	100.0%	46.1%	N/a	13.3%	N/a	47.2%
Witloof Chicory (French Endive)	100.0%	57.7%	N/a	N/a	100.0%	60.0%	N/a	N/a	57.6%
Fennel – Bitter	N/a	100.0%	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Fennel – Sweet	100.0%	47.4%	N/a	N/a	100.0%	N/a	N/a	N/a	47.4%
Garlic	44.1%	48.3%	56.3%	44.1%	61.9%	84.4%	N/a	N/a	47.9%
Herbs – Lemongrass, etc.	63.3%	78.5%	67.0%	74.8%	72.6%	76.6%	43.3%	N/a	50.7%
Horseradish	N/a	100.0%	N/a	100.0%	N/a	100.0%	N/a	N/a	87.5%
Leeks	29.1%	18.8%	20.1%	16.8%	24.4%	18.7%	N/a	44.3%	15.9%
Marrows & Squash	24.3%	47.5%	26.7%	46.8%	15.7%	30.3%	37.4%	N/a	19.2%
Zucchini	14.2%	19.3%	14.0%	19.5%	14.0%	38.0%	41.7%	56.2%	13.4%
Okra	N/a	100.0%	51.2%	N/a	68.0%	N/a	100.0%	N/a	49.9%
Onions – Spring (incl. Shallots)	32.4%	30.0%	15.3%	22.6%	25.4%	22.7%	100.0%	49.0%	15.0%
Parsley	35.2%	15.8%	24.2%	14.6%	47.9%	39.0%	N/a	100.0%	13.9%
Snow Peas	24.1%	34.2%	23.0%	57.0%	33.4%	78.9%	N/a	54.2%	24.1%
Radish	71.0%	45.3%	52.2%	51.5%	53.1%	100.0%	N/a	100.0%	41.0%
Rhubarb	81.0%	68.0%	54.9%	42.4%	68.6%	100.0%	N/a	N/a	42.8%
Silver Beet & Spinach	45.2%	41.7%	44.4%	43.2%	53.7%	44.4%	N/a	100.0%	41.9%
Sprouts (Alfalfa, Mung Bean, etc.)	100.0%	72.1%	56.6%	N/a	67.1%	100.0%	N/a	N/a	61.2%
Gherkins	99.9%	N/a	100.0%	N/a	N/a	N/a	N/a	N/a	68.3%
Vegetables n.e.c.	47.5%	51.9%	49.0%	49.3%	42.9%	52.2%	51.0%	100.0%	42.0%
<i>Total Other Vegetables</i>	<i>5.2%</i>	<i>7.7%</i>	<i>9.2%</i>	<i>4.5%</i>	<i>6.7%</i>	<i>8.1%</i>	<i>8.4%</i>	<i>46.8%</i>	<i>6.9%</i>
Peas									
Peas (Green) – Fresh	10.8%	28.1%	26.4%	37.3%	30.8%	29.5%	N/a	N/a	8.0%
Peas (Green) – Processing	37.5%	55.4%	21.6%	43.1%	32.7%	3.7%	N/a	N/a	4.7%
<i>Total Peas</i>	<i>16.4%</i>	<i>27.8%</i>	<i>15.5%</i>	<i>36.7%</i>	<i>31.7%</i>	<i>3.7%</i>	<i>N/a</i>	<i>N/a</i>	<i>4.6%</i>
Potatoes									
Potatoes	7.4%	2.2%	5.0%	6.6%	3.9%	5.2%	100.0%	N/a	3.9%
<i>Total Potatoes</i>	<i>7.4%</i>	<i>2.2%</i>	<i>5.0%</i>	<i>6.6%</i>	<i>3.9%</i>	<i>5.2%</i>	<i>100.0%</i>	<i>N/a</i>	<i>3.9%</i>
Tomatoes									
Tomatoes – Fresh	30.1%	20.9%	22.6%	23.6%	23.9%	25.1%	83.8%	90.1%	21.2%
Tomatoes – Processing	21.1%	19.8%	60.4%	44.2%	47.8%	90.6%	57.3%	N/a	18.3%
<i>Total Tomatoes</i>	<i>23.6%</i>	<i>20.0%</i>	<i>22.6%</i>	<i>23.6%</i>	<i>23.8%</i>	<i>25.1%</i>	<i>79.9%</i>	<i>90.1%</i>	<i>20.5%</i>
Total Vegetables	7.5%	6.4%	9.4%	4.7%	6.7%	6.2%	7.8%	46.8%	6.7%

Source: Australian Bureau of Statistics Agricultural Survey

9.4 Nurseries

Table 9.4: Average Standard Errors for Nursery GVP Data by State, 1993-94 to 2002-03

Industry	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
Nurseries									
Cultivated Turf	6.6%	13.8%	7.2%	17.8%	13.4%	N/a	18.5%	100.0%	9.4%
Nurseries	2.9%	10.0%	5.4%	2.7%	4.4%	7.4%	23.4%	100.0%	2.2%
<i>Total Nurseries</i>	<i>3.2%</i>	<i>10.5%</i>	<i>3.1%</i>	<i>3.4%</i>	<i>5.3%</i>	<i>7.4%</i>	<i>18.2%</i>	<i>100.0%</i>	<i>3.6%</i>
Cut Flowers									
Cut Flowers	2.3%	4.2%	6.5%	3.9%	5.0%	6.0%	8.4%	N/a	3.5%
<i>Total Cut Flowers</i>	<i>2.3%</i>	<i>4.2%</i>	<i>6.5%</i>	<i>3.9%</i>	<i>5.0%</i>	<i>6.0%</i>	<i>8.4%</i>	<i>N/a</i>	<i>3.5%</i>
Total Nursery	2.8%	7.7%	2.4%	2.6%	5.0%	5.8%	11.9%	100.0%	3.4%

Source: Australian Bureau of Statistics Agricultural Survey

9.5 Other Crops

Table 9.5: Average Standard Errors for Other Crop n.e.i. GVP Data by State, 1993-94 to 2002-03

Industry	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
Other Crops n.e.i.									
Hops	N/a	10.8%	N/a	N/a	N/a	9.5%	N/a	N/a	9.8%
Lavender	N/a	100.0%	N/a	N/a	N/a	N/a	N/a	N/a	100.0%
Oil Poppies	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Coriander	63.0%	78.7%	100.0%	22.0%	80.2%	N/a	N/a	N/a	27.0%
Pyrethrum	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Peppermint	100.0%	34.5%	N/a	N/a	N/a	N/a	N/a	N/a	34.6%
Tobacco	76.8%	17.6%	14.4%	N/a	N/a	N/a	N/a	N/a	4.0%
Other Crops	28.5%	38.6%	38.2%	48.4%	44.5%	15.0%	65.9%	60.8%	36.0%
Vegetables for Seed – Beans	61.4%	61.1%	72.7%	100.0%	100.0%	100.0%	N/a	N/a	47.1%
Vegetables for Seed – Carrots	66.4%	66.4%	100.0%	100.0%	97.6%	57.7%	N/a	100.0%	73.1%
Vegetables for Seed – Cabbages	100.0%	100.0%	N/a	57.1%	N/a	51.4%	N/a	N/a	55.1%
Vegetables for Seed – Cauliflower	79.1%	46.0%	79.3%	92.6%	82.3%	38.2%	N/a	N/a	41.9%
Vegetables for Seed – Onions	81.8%	34.7%	67.6%	33.9%	91.1%	32.8%	N/a	N/a	45.2%
Vegetables for Seed – Peas (Green)	85.3%	63.3%	100.0%	52.4%	100.0%	49.1%	N/a	N/a	39.4%
Vegetables for Seed – Potatoes	17.5%	5.1%	23.4%	10.6%	13.2%	5.2%	N/a	N/a	4.1%
Vegetables for Seed – Other	74.9%	61.5%	70.5%	30.4%	100.0%	62.6%	N/a	99.5%	48.0%
Aloe Vera	100.0%	N/a	96.5%	N/a	N/a	N/a	N/a	N/a	96.6%
Babacos	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Coffee	80.3%	N/a	47.1%	N/a	N/a	N/a	N/a	N/a	45.5%
Pepinos	100.0%	N/a	N/a	N/a	N/a	N/a	N/a	N/a	100.0%
Tea	100.0%	N/a	N/a	N/a	N/a	N/a	N/a	N/a	100.0%
Total Other Crops n.e.i.	39.3%	10.5%	24.8%	29.7%	21.1%	7.2%	65.9%	48.4%	12.5%

Source: Australian Bureau of Statistics Agricultural Survey

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AH06005 Horticulture Data Audit

Volume II: Industry Summaries

Horticulture Australia Limited

Final Report

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1. Fruit and Nut Industry Summaries

1.1 Grapes

1.1.1 Table Grapes

Industry Association: Australian Table Grape Association (ATGA)
Number of Growers: Not identified
Register of Growers: The local associations have the lists of growers
Members: The ATGA's members are delegates of the local associations

Table 1.1.1: Farm Gate Data

Name/Source Production Data	Frequency	Method of Collection	Collected By	Regionality	Comments
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Vineyards Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers: <ul style="list-style-type: none"> All farms classified under ANZSIC code 0114 (grape growing) Farms specifically marked for inclusion Farms that identify area grown to viticulture during the Agricultural Census or Surveys Data collected on production of table grapes by variety
Levy	Quarterly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per kilogram of table grapes produced in Australia and sold (including export) by the producer
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Price Data ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> • ABS collects price information to estimate GVP • Price data is for 'wholesale price realised in the marketplace' • Prices collected from a variety of sources, such as marketing authorities and industry sources • Timing of transactions and price variability not considered
Cost of Production Data					
N/a					
Capital Cost Data					
N/a					

Table 1.2: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> • Covers imports and exports of: <ul style="list-style-type: none"> ◦ Fresh grapes ◦ Sultanas ◦ Raisins ◦ Other dried grapes • Data includes: <ul style="list-style-type: none"> ◦ Destination ◦ Country/State of origin ◦ Timing ◦ Volume ◦ Value
Retail Data AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Market Price Data Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> • Indicative wholesale price ranges by quality, quantity and variety • Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth • Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.3: Additional Information

<p>Production / Price Signals:</p> <ul style="list-style-type: none">• Quality and consistency are considered by industry to be the primary drivers of consumption.• No signals are provided to growers to inform production decisions. <p>Market Structure:</p> <p><i>Major Markets:</i></p> <ul style="list-style-type: none">• The major domestic markets for table grapes are in Melbourne, Brisbane and Sydney, with smaller markets in Perth and Adelaide.• Approximately 45% of total production is exported. <p><i>Market Channels:</i></p> <ul style="list-style-type: none">• Approximately 90% of growers sell to wholesale or export.• Wholesalers sell predominantly to retail chains or independent retailers. <p>Other Information:</p> <ul style="list-style-type: none">• N/a
--

1.2 Citrus

Industry Association:

Australian Citrus Growers Inc (ACG)

Number of Growers:

Approximately 2,000

Register of Growers:

ACG don't keep a register of growers, the regional citrus organisations have these

Members:

The regional citrus organisations are the members of ACG

Table 1.4: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per: <ul style="list-style-type: none"> Tonne of fresh citrus produced in Australia and sold (including export) in bulk by the producer Box of fresh citrus produced in Australia and sold (including export) by the producer not in bulk Levy not payable for citrus sold as stockfeed
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
National Planting Database	Ongoing	Aerial photography, in combination with grower consultation and surveys	Regional citrus organisations	Regional	<ul style="list-style-type: none"> Utilises GIS capability Information collected on: <ul style="list-style-type: none"> Number of trees by: <ul style="list-style-type: none"> Variety Age Management technique: <ul style="list-style-type: none"> Irrigation Plant arrangement Cropping Root stock Sample of farms inspected at beginning of season to obtain indicative fruit counts, size and density per tree for forecasting purposes Updated continually with current production figures
Internet Dispatch System	Ongoing	Internet entries by packers	ACG	Not identified	<ul style="list-style-type: none"> Currently being developed Will be similar to Avocados Australia's Internet Dispatch System Packers will provide production and market information It is envisaged that information from the National Planting Database, as well as other market information, will be available to members of the supply chain from the Internet Dispatch System
Regional Citrus Organisation Data (Production)	Ongoing	Voluntarily contributed by growers, packers, processors, marketers and exporters	Regional citrus organisations	Regional	<ul style="list-style-type: none"> The regional citrus organisations collect information from growers, packers, processors, marketers and exporters to assist in updating the National Planting Database on an ongoing basis This information is voluntarily provided by growers, packers, processors, marketers and exporters
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	<ul style="list-style-type: none"> Forecasts Queensland mandarin production for current financial year and provides comparison with estimates for previous years
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered
Regional Citrus Organisation Data (Price)	Weekly	Not identified	Regional citrus organisations	State	<ul style="list-style-type: none"> Wholesale price data in major markets (particularly Sydney, Melbourne and Brisbane) is collected from market agents on a weekly basis by some of the regional citrus organisations, such as the Murray Valley Citrus Board and Riverina Citrus Retail prices are also collected Murray Valley Citrus Board disseminates this data to growers in weekly reports
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	<ul style="list-style-type: none"> Forecasts Queensland mandarin prices received by producers for current financial year and provides comparison with estimates for previous years

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Cost of Production Data Productivity Commission Citrus Growing and Processing Report	Periodic	Consultation with industry	NSW Agriculture and PIRSA	State	<ul style="list-style-type: none"> • NSW Agriculture and Primary Industries and Resources South Australia (PIRSA) provided cost of production estimates for farms in Sunraysia, Murrumbidgee and South Australia • Includes data such as: <ul style="list-style-type: none"> ◦ Planting ◦ Chemical spraying ◦ Pruning ◦ Harvesting ◦ Crop management ◦ Cartage ◦ Water and power
Capital Cost Data Productivity Commission Citrus Growing and Processing Report	Periodic	Consultation with industry	NSW Agriculture and PIRSA	State	<ul style="list-style-type: none"> • NSW Agriculture and Primary Industries and Resources South Australia (PIRSA) provided cost of production estimates for farms in Sunraysia, Murrumbidgee and South Australia • Includes data such as: <ul style="list-style-type: none"> ◦ Site preparation ◦ Irrigation

Table 1.5: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data					
Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> • Covers the following citrus imports and exports: <ul style="list-style-type: none"> ◦ Oranges: <ul style="list-style-type: none"> ▪ Navel ▪ Valencia ▪ Other ▪ Dried ◦ Mandarins: <ul style="list-style-type: none"> ▪ Fresh ▪ Dried ◦ Lemons & Limes: <ul style="list-style-type: none"> ▪ Fresh ▪ Dried ◦ Grapefruit: <ul style="list-style-type: none"> ▪ Fresh ▪ Dried ◦ Other citrus: <ul style="list-style-type: none"> ▪ Fresh ▪ Dried • Data includes: <ul style="list-style-type: none"> ◦ Destination ◦ Country/State of origin ◦ Timing ◦ Volume ◦ Value
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Market Price Data					
Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> • Indicative wholesale price ranges by quality, quantity and variety • Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth • Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.6: Additional Information

<p>Production / Price Signals:</p> <ul style="list-style-type: none"> • Season update reports are produced every month by ACG and disseminated to growers through the regional citrus organisations. • The Murray Valley Citrus Board publishes weekly reports providing information on wholesale and retail prices and market conditions in Sydney, Melbourne and Brisbane for Murray Valley citrus. • It is envisaged that the Internet Dispatch System, once implemented, will provide up-to-date market information to industry. <p>Market Structure:</p> <p><i>Mandarins:</i></p> <ul style="list-style-type: none"> • Primarily located in Queensland. • Tend to be large scale operations. • The majority of mandarin growers have their own pack-house or have an ongoing relationship with a pack-house. • Market agents are preferred for marketing the product. • The majority of mandarins are sold retail. <p><i>Oranges:</i></p> <ul style="list-style-type: none"> • There are approximately 1,800 orange growers, located over a number of regions. • Pack-houses tend to be run independently of growing operations, with growers supplying the pack-houses. • Pack-houses sell to: <ul style="list-style-type: none"> ◦ Wholesale or retail (approximately 30%); ◦ Export (approximately 25%); and ◦ Processors (approximately 45%). <p>Other Information:</p> <ul style="list-style-type: none"> • N/a
--

1.3 Pome Fruit

1.3.1 Apples & Pears

Industry Association: Apple and Pear Australia Limited (APAL)

Number of Growers: Approximately 1,400 growers

Register of Growers: Approximately 95% of all growers estimated to be on list

Members: Approximately 25% of all growers on register are members

Table 1.7: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Apple and Pear Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Extension of the annual Agricultural Survey Funded by APAL and HAL Covers all known apple and pear (excl. Nashi) producers with an EVAO of greater than \$5,000 Seasonality not considered
Levy	Quarterly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per kilogram of fresh apples and pears (excl. Nashi) produced in Australia and sold (including export) by the producer Levy also payable on all juicing and processing apples and pear (excl. Nashi) per tonne of apples and pears (excl. Nashi) sold for these purposes
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Cool Store Stock Data	Monthly	Collected from major/key cool stores	APAL	Regional	<ul style="list-style-type: none"> Monthly collection of stock level data from major/key cool stores Anecdotal evidence suggests this data can be extrapolated to provide a good indication of total stock
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	<ul style="list-style-type: none"> Forecasts Queensland apple production for current financial year and provides comparison with estimates for previous years

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	<ul style="list-style-type: none"> Provides Tasmanian apple and pear production estimates
Price Data ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered Forecasts Queensland apple prices received by producers for current financial year and provides comparison with estimates for previous years Provides Tasmanian apple and pear value estimates
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	
Cost of Production Data APAL Productivity & Efficiency Analysis	Periodic	Not identified	APAL, DAFF	Not identified	<ul style="list-style-type: none"> Examines the productivity and efficiency at a farm level Most operating costs are included, such as: <ul style="list-style-type: none"> Planting; Spraying; Harvesting; Sorting; and Packing. Can be used to benchmark
Capital Cost Data APAL Productivity & Efficiency Analysis	Periodic	Not identified	APAL, DAFF	Not identified	<ul style="list-style-type: none"> Does not include cost of land or irrigation, but does include cost of netting and pack-house infrastructure

Table 1.8: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data					
Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> • Covers the following apple and pear imports and exports: <ul style="list-style-type: none"> ◦ Apples: <ul style="list-style-type: none"> ▪ Delicious (red, golden, ordinary, earlidel) ▪ Democrat ▪ Fuji ▪ Granny Smith ▪ Pink Lady ▪ Sundowner ▪ Other ▪ Dried ◦ Pears: <ul style="list-style-type: none"> ▪ Buerre Bosc ▪ Packham ▪ Other • Data includes: <ul style="list-style-type: none"> ◦ Destination ◦ Country/State of origin ◦ Timing ◦ Volume ◦ Value
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
FRESHlogic Apple & Pear Market Monitor	Periodic	Consultation with industry throughout the supply chain ABS Statistics Industry reports	FRESHlogic	Not identified	<ul style="list-style-type: none"> • Pools and processes data to profile market performance, trends and the implications for apples and pears at the retail level. • Aims to inform the market and guide better commercial decisions
Market Price Data					
Market Price Data	Weekly/ Fortnightly	Collected from market	APAL, AFFCO	State	<ul style="list-style-type: none"> • Weekly/fortnightly retail and wholesale prices for apples and pears

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> • Indicative wholesale price ranges by quality, quantity and variety • Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth • Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.9: Additional Information

Production / Price Signals:

- APAL produce a monthly magazine disseminating information on production and market trends for each variety.
- A consumer preference / market information audit has been conducted in the past by Synovate.
- The FRESHlogic Market Monitor provides information on market performance, trends and the implications for apples and pears at the retail level.
- The Well Informed Grower Project, part funded by HAL, has resulted in the collection and dissemination of a range of information throughout the apple and pear supply chain, including:
 - Updates on seasonal conditions;
 - Harvest updates;
 - Crop volumes;
 - Stock figures;
 - Competitor product updates (e.g. banana prices and supply); and
 - Retail and wholesale price reports.

Market Structure:

Processing:

- Approximately 20% of total production goes to processing.

Fresh Product:

- Of the remaining 80% of total production:
 - A large proportion goes from the packer to retail (through category managers) and wholesale (through agents) as whole, fresh fruit; and
 - A small proportion is exported from the packer through an export merchant, with a small proportion direct to an importing company.

Other Information:

- Most key growers in Australia tend to be grower/ packers, operating their own pack-house on farm. This is contrary to the usual practice internationally, with major producers such as the US generally utilising a more independent and centralised pack-house arrangement where pack-houses are off-farm, independent enterprises that are supplied by a number of growers.

1.4 Stone Fruit

1.4.1 Avocados

Industry Association: Avocados Australia (AA)
Number of Growers: Approximately 1,200
Register of Growers: Approximately 1,200
Members: Confidential

Table 1.10: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per : <ul style="list-style-type: none"> Tonne of avocados produced in Australia and sold (including export) by the producer in bulk Tray of avocados sold in standard 6 kilogram trays
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Internet Dispatch System	Weekly	Internet entries marketers	AA	Not identified	<ul style="list-style-type: none"> The following information is collected and disseminated: <ul style="list-style-type: none"> Dispatch data (quantity of product by market) Four week rolling production estimate 15 month production forecasts Information provided by whomever places the product on the market, which can be grower-packers, packers or marketing groups Anecdotal evidence suggests this system is currently capturing approximately 85% of production

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	<ul style="list-style-type: none"> Forecasts Queensland avocado production for current financial year and provides comparison with estimates for previous years
Price Data ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered Forecasts Queensland avocado prices received by producers for current financial year and provides comparison with estimates for previous years
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	
Cost of Production Data					
N/a					
Capital Cost Data					
N/a					

Table 1.11: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> Covers fresh avocado imports and exports Data includes: <ul style="list-style-type: none"> Destination Country/State of origin Timing Volume Value
Retail Data AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Price Data Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.12: Additional Information

Production / Price Signals:

- Avocados Australia publish a weekly report disseminating production estimates, forecasts, and dispatch market data using data collected from the Internet Dispatch System.

Market Structure:

Trading Channels:

- Trading is handled through the following channels:
 - Grower handles both packing and marketing of fruit;
 - Grower packs the fruit and places it on the market through a marketing group;
 - Grower picks the fruit and sends to a packer, who then handles the marketing arrangements; or
 - Grower picks the fruit, sends to a packer, who then has the fruit placed on the market by a marketing group.

Markets:

- 40% - 50% of total production is sold direct from the grower / packer to supermarket.
- Supermarkets purchase a further 10% - 20% of total production from wholesale markets.
- Approximately 2% of total production is exported.

Other Information:

- As a second stage of the Internet Dispatch System, Avocados Australia are looking into extending the system to include annually collected information from growers on plantings by:
 - Variety;
 - Age of tree;
 - Management;
 - Etc.
- As a third stage of the Internet Dispatch System, Avocados Australia are looking to extend the system to include data collected from growers on their costs of production.

1.4.2 Cherries

Industry Association: Cherry Growers of Australia Inc. (CGAI)
Number of Growers: Approximately 700 to 750 growers
Register of Growers: Have approximately 700 growers on register, with the lists provided by the State affiliations
Members: CGAI don't have any growers as members – growers can be members of the State affiliations

Table 1.13: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per kilogram of fresh cherries produced in Australia and sold (including export) by the producer Cherries sold for processing are exempt from the levy
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered
Cost of Production Data					
N/a					
Capital Cost Data					
N/a					

Table 1.14: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data					
Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> • Covers imports and exports of: <ul style="list-style-type: none"> ◦ Fresh cherries ◦ Preserved cherries • Data includes: <ul style="list-style-type: none"> ◦ Destination ◦ Country/State of origin ◦ Timing ◦ Volume ◦ Value
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Market Price Data					
Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> • Indicative wholesale price ranges by quality, quantity and variety • Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth • Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.15: Additional Information

<p>Production / Price Signals:</p> <ul style="list-style-type: none">• The CGAI publish a monthly newsletter, "Tree Fruit", that provides some market information to growers.• Prices influenced primarily by time of year and stock levels. <p>Market Structure:</p> <ul style="list-style-type: none">• Pick-your-own and orchard sales are popular markets for Australian cherries.• Other main channels for Australian cherries include:<ul style="list-style-type: none">◦ Direct to retail;◦ Direct to packers / processors; and◦ Export. <p>Other Information:</p> <ul style="list-style-type: none">• The CGAI are currently seeking an increase in the levy on cherries in order to fund additional research, including ongoing collection of the following information:<ul style="list-style-type: none">◦ Tree numbers (by variety);◦ Plantings (by variety);◦ Removals (by variety);◦ Age of trees (by variety); and◦ Stocks.
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1.4.3 Custard Apples

Industry Association: Australian Custard Apple Growers Association (ACAGA)
Number of Growers: Approximately 250 growers
Register of Growers: Approximately 250 growers
Members: Approximately 110 paid members

Table 1.16: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per: <ul style="list-style-type: none"> Tray/ box of packaged custard apples produced in Australia and sold (including export) by the producer Tonne of custard apples produced in Australia and sold in bulk (including export) by the producer Custard apples sold for processing or direct from the grower to the consumer are exempt from the levy
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Marketing Return Group Data	Not identified	Growers provide data	Marketing Return Group	Not identified	<ul style="list-style-type: none"> The Marketing Return Group is comprised of approximately 30 of the 250 total growers Information is collected using the Australian Tropical Fruits Portal electronic dispatch system Provide farm gate sales figures to the ACAGA, including quantity produced

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
ACAGA Industry Database	Annual	Application form and survey	ACAGA	Regional	<ul style="list-style-type: none"> As part of annual membership renewal form, collect information from members (account for approximately 60% of total production) on: <ul style="list-style-type: none"> Tree numbers Age of trees Annual production On a biannual basis ring non-members to get information on: <ul style="list-style-type: none"> Tree numbers Estimates of production for non-members are estimated using tree numbers and expected average yield Anecdotal evidence indicates that ACAGA production estimates are slightly below levy figures
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered
Marketing Return Group Data	Not identified	Growers provide data	Marketing Return Group	Not identified	<ul style="list-style-type: none"> The Marketing Return Group is comprised of approximately 30 of the 250 total growers Information is collected using the Australian Tropical Fruits Portal electronic dispatch system Provide farm gate sales figures to the ACAGA, including prices received
Cost of Production Data					
N/a					
Capital Cost Data					
N/a					

Table 1.17: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data					
N/a					
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Market Price Data Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> • Indicative wholesale price ranges by quality, quantity and variety • Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth • Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.18: Additional Information

Production / Price Signals:

- The Marketing Return Group (which is comprised of approximately 30 growers) provides information regarding prices received for certain quantities and qualities. This information is collected from the Australian Tropical Fruits Portal electronic dispatch system.

Market Structure:

- All produce is sold through wholesale markets.

Other Information:

Legislation:

- The ACAGA also collect information on which markets both members and non-members sell their product through as part of their industry database.
- Custard apple exports are captured by Customs under the "other" category.

1.4.4 Lychees

Industry Association: Australian Lychee Growers Association

Number of Growers: Approximately 250

Register of Growers: Not identified

Members: Not identified

Table 1.19: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per kilogram of fresh and processing lychees produced in Australia and sold (including export) by the producer Lychees sold direct from the grower to the consumer are exempt from the levy
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Cost of Production Data RIRDC Financial Analysis	Periodic (one off)	Consultation with industry	RIRDC	State	<ul style="list-style-type: none"> Analysis conducted in 1999 as part of a Rural Industries Research & Development Corporation (RIRDC) project Costs of production reported include: <ul style="list-style-type: none"> Seed / stock Water Soil preparation Fertiliser Chemicals and spraying Harvesting Maintenance Disposal Permits
Capital Cost Data RIRDC Financial Analysis	Periodic (one off)	Consultation with industry	RIRDC	State	<ul style="list-style-type: none"> Analysis conducted in 1999 as part of a Rural Industries Research & Development Corporation (RIRDC) project Initial investment costs reported include: <ul style="list-style-type: none"> Land (purchase / lease and field investigations) Building infrastructure Machinery Irrigation Crop protection (trellises, fences, etc.)

Table 1.20: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data N/a					
Retail Data AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Price Data Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.21: Additional Information

<p><u>Production / Price Signals:</u></p> <ul style="list-style-type: none">• Not identified. <p><u>Market Structure:</u></p> <p><i>Production:</i></p> <ul style="list-style-type: none">• The bulk of Australia's lychee production is sold locally (between 65% to 80%), with the majority sold in Sydney and Melbourne markets.• The remaining 20% to 35 % of the lychee crop is exported. <p><i>Exports:</i></p> <ul style="list-style-type: none">• Australian lychees are exported primarily to:<ul style="list-style-type: none">◦ Hong Kong;◦ Singapore;◦ United Kingdom;◦ France;◦ Belgium;◦ United Arab Emirates; and◦ Canada. <p><u>Other Information:</u></p> <ul style="list-style-type: none">• N/a
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1.4.5 Mangoes

Industry Association: Australian Mango Industry Association Ltd (AMIA)
Number of Growers: Approximately 1,550 – 1,600
Register of Growers: Estimated to have approximately 95% of all growers
Members: Confidential

Table 1.22: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per tray of mangoes produced in Australia and sold (including export) by the producer Mangoes sold for processing are exempt from the levy Anecdotal evidence indicates levy captures 95% of production Some road side sales not captured by levy
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Department of Primary Industries Transport Volume Data	Annual	Collected from transport companies	Queensland DPI	Not identified	<ul style="list-style-type: none"> DPI collect volumes from transport companies at end of season Can result in some double counting
Northern Territory Production Estimates	Weekly	Collected from various points (e.g. transport, packers, etc.)	NT Government	Not identified	<ul style="list-style-type: none"> Data are estimates only
Northern Territory Flowerings Survey	Annual	Survey	NT Government	Not identified	<ul style="list-style-type: none"> Used to predict timing and quantity of production Provides an indication of when peak supply periods will be AMIA hoping to expand this to Queensland
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	<ul style="list-style-type: none"> Forecasts Queensland mango production for current financial year and provides comparison with estimates for previous years

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> • ABS collects price information to estimate GVP • Price data is for 'wholesale price realised in the marketplace' • Prices collected from a variety of sources, such as marketing authorities and industry sources • Timing of transactions and price variability not considered • Forecasts Queensland mango prices received by producers for current financial year and provides comparison with estimates for previous years
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	
Cost of Production Data					
N/a					
Capital Cost Data					
N/a					

Table 1.23: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data					
Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> • Covers mango imports and exports • Data includes: <ul style="list-style-type: none"> ◦ Destination ◦ Country/State of origin ◦ Timing ◦ Volume ◦ Value
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Market Price Data					
Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> • Indicative wholesale price ranges by quality, quantity and variety • Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth • Data available for all fruit and vegetable commodities sold through wholesale channels in Australia • AMIA part fund a daily market report for mangoes (published on the AMIA website)

Table 1.24: Additional Information

Production / Price Signals:

- The AMIA fund and publish daily market reports compiled by Ausmarket Consultants that provide indicative price ranges for mangoes by variety and quality in Sydney, Melbourne, Brisbane, Adelaide and Perth.
- Woolworths and Coles are expected to have direct suppliers but it is currently unclear how prices are arranged.

Market Structure:

Production:

- About 60% of total production goes through wholesale.
- Approximately 20% of total production is sold direct from the grower to retail.
- Approximately 15% of total production goes to processors.
- Approximately 5% of total production is exported.

Supermarkets:

- Woolworths and Coles sell about 48% of fresh mangoes. Half to two-thirds of this is estimated to be supplied directly from the growers, with the residual sourced from the market (i.e. wholesalers).

Other Information:

- Mangoes are a highly seasonal commodity and plants typically take four seasons to become productive.

1.4.6 Persimmons

Industry Association: Persimmon Industry Association Inc (PIA)
Number of Growers: Not identified
Register of Growers: PIA believe the register is a complete list of growers
Members: Majority of growers on register are non-members

Table 1.25: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per kilogram of persimmons produced in Australia and sold (including export) by the producer Persimmons sold direct from the grower to the consumer is exempt from the levy
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Membership Application/Renewal	Annual	Application form	PIA	Not identified	<ul style="list-style-type: none"> Recently begun requesting information regarding the number of hectares planted to persimmon on membership application/renewal forms
Queensland DPI State of the Industry	Periodic	Consultation with industry	Queensland DPI	Regional	<ul style="list-style-type: none"> Information collected on: <ul style="list-style-type: none"> Tree numbers Production Value Orchard size Tree yields Planting arrangements

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Price Data ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> • ABS collects price information to estimate GVP • Price data is for 'wholesale price realised in the marketplace' • Prices collected from a variety of sources, such as marketing authorities and industry sources • Timing of transactions and price variability not considered
Cost of Production Data Persimmon Growing Guide	Periodic	Consultation with industry	Queensland DPI	State	<ul style="list-style-type: none"> • Cost of production data has been collected in the past by the Queensland DPI
Capital Cost Data Persimmon Growing Guide	Periodic	Consultation with industry	Queensland DPI	State	<ul style="list-style-type: none"> • Cost of production data (including capital/ infrastructure costs) has been collected in the past by the Queensland DPI

Table 1.26: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data N/a					
Retail Data AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Market Price Data Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> • Indicative wholesale price ranges by quality, quantity and variety • Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth • Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.27: Additional Information

<p>Production / Price Signals:</p> <ul style="list-style-type: none">• The PIA provide advice regarding market conditions when specifically contacted by growers for this information.• The Australian Persimmon Export Company also provides advice to growers regarding market conditions and demand for product in overseas markets. <p>Market Structure:</p> <p><i>Market Channels:</i></p> <ul style="list-style-type: none">• Approximately 95% of total production is sold through wholesale markets. <p><i>Exports:</i></p> <ul style="list-style-type: none">• Approximately 20% of total production is exported. <p>Other Information:</p> <ul style="list-style-type: none">• N/a
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1.4.7 Summerfruit

Industry Association:

Summerfruit Australia Limited (SAL)

Number of Growers:

Between 1,200 and 2,000 growers

Register of Growers:

Have a list of growers, however this has not been recently updated

Members:

Have approximately 440 members and 200 levy payers on current register

Table 1.28: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per: <ul style="list-style-type: none"> 5 kilogram tray of stone fruit not sold in bulk 10 kilogram box of stone fruit not sold in bulk Kilogram of stone fruit sold in bulk Stone fruit sold directly from the producer to a processor is exempt from the levy
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	<ul style="list-style-type: none"> Provides Tasmanian stonefruit production estimates
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	<ul style="list-style-type: none"> Provides Tasmanian stonefruit value estimates
Cost of Production Data Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	<ul style="list-style-type: none"> Provides estimates of cost of production for Tasmanian stonefruit
Capital Cost Data Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	<ul style="list-style-type: none"> Provides estimates of cost of infrastructure for Tasmanian stonefruit

Table 1.29: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> Covers imports and exports of: <ul style="list-style-type: none"> Fresh apricots Fresh peaches Fresh nectarines Fresh plums and sloes Dried apricots Apricots otherwise prepared or preserved, whether or not containing added sugar or other sweetening matter or spirit Peaches (including nectarines) otherwise prepared or preserved, whether or not containing added sugar or other sweetening matter or spirit Data includes: <ul style="list-style-type: none"> Destination Country/State of origin Timing Volume Value
Retail Data AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category

Name /Source	Frequency	Method of Collection	Collected By	Regionality	Comments
FRESH/ogic Summerfruit Market Monitor	Weekly	Consultation with industry throughout the supply chain ABS Statistics Industry reports	FRESH/ogic	Not identified	<ul style="list-style-type: none"> • Pools and processes data to profile market performance, trends and the implications for summerfruit at the retail level. • Aims to inform the market and guide better commercial decisions • Summary of findings reported at the end of each season in the annual report
Market Price Data Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> • Indicative wholesale price ranges by quality, quantity and variety • Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth • Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.30: Additional Information

Production / Price Signals:

- The FRESH/ogic Market Monitor provides information on market performance, trends and the implications for apples and pears at the retail level.
- SAL publish weekly bulletins on their website that inform growers of industry news.
- Drivers of demand are:
 - Seasonality – influenced by production and consumer preferences;
 - Consistency – consumers aren't willing to pay a price premium for a product of variable quality.

Market Structure:

- A large proportion of product is sold to wholesalers.
- Other, smaller market channels include:
 - Direct from grower to retailer;
 - Central market (growers selling their own product at central markets); and
 - Export.
- SAL is the PIB for fresh summerfruit and does not cover processed summerfruit.
- Many summerfruit growers produce other crops such as apples or oranges. This influences the method of trading they undertake as most growers would prefer to use the same channel for both commodities.

Other Information:

- SAL are investigating the potential for developing an information system similar to Avocados Australia's Internet Dispatch System. However, this is expected to prove difficult as the summerfruit industry is not as cohesive as the avocado industry with many growers not feeling fully comfortable providing commercially sensitive information.

1.5 Other Fruit and Berries

1.5.1 Bananas

Industry Association: Australian Banana Growers Council (ABGC)

Not identified

Have approximately 1,200 growers on register

Approximately 100 formal members, with a larger number that pay ABGC but haven't completed a membership form

Register of Growers:

Members:

Table 1.31: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
ABGC Transport Volume Data	Weekly	Collected from transport companies	ABGC	Not identified	<ul style="list-style-type: none"> Production data from transport company manifests supplied on a weekly basis. Information used to produce weekly production report available on ABGC website.
Department of Primary Industries Transport Volume Data	Annual	Collected from transport companies	Queensland DPI	Not identified	<ul style="list-style-type: none"> DPI collect volumes from transport companies in Northern Queensland at end of season Northern Queensland accounts for approximately 95% of total production in most years
Department of Primary Industries Plantings Data	Ongoing	Planting permits	Queensland DPI	Not identified	<ul style="list-style-type: none"> Growers must apply for a planting permit through the Queensland DPI for each plant they intend to grow This can only be used as indicative of production as growers do not need to supply information regarding plant removals (therefore don't know exactly how many plants are in the ground)

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Crop Forecasting System	Annual	Growers supply data	Growcom (implemented by ABGC)	Not identified	<ul style="list-style-type: none"> Growers supply information on number of bells, which is collated and examined in the crop forecasting system Bananas take 13 weeks to grow, thus have relatively accurate forecasts of production and timing of production Only recently implemented, currently only have a small proportion of growers using this system The QFVG (now Growcom) previously collected production data from growers and wholesalers, but has now ceased This data was disseminated to growers on a weekly / monthly basis
Banana Production Data	Weekly	Consultation with growers and wholesalers	Growcom	Not identified	<ul style="list-style-type: none"> The QFVG (now Growcom) previously collected production data from growers and wholesalers, but has now ceased This data was disseminated to growers on a weekly / monthly basis
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	<ul style="list-style-type: none"> Forecasts Queensland banana production for current financial year and provides comparison with estimates for previous years
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered
Banana Price Data	Weekly	Consultation with growers and wholesalers	Growcom	Not identified	<ul style="list-style-type: none"> The QFVG (now Growcom) previously collected price data from growers and wholesalers, but has now ceased This data was disseminated to growers on a weekly / monthly basis
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	<ul style="list-style-type: none"> Forecasts Queensland banana prices received by producers for current financial year and provides comparison with estimates for previous years
Cost of Production Data					
Banana Growing Guide	Periodic	Consultation with industry	Queensland DPI	State	<ul style="list-style-type: none"> Typical cost of production data has been collected including: <ul style="list-style-type: none"> Ground preparation Irrigation Fertiliser Input costs (labour, plants, chemicals, etc.) Transport Handling
Capital Cost Data					
Banana Growing Guide	Periodic	Consultation with industry	Queensland DPI	State	<ul style="list-style-type: none"> Cost of leasing property has been collected

Table 1.32: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data					
Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> Covers imports and exports of fresh bananas (including plantains) Data includes: <ul style="list-style-type: none"> Destination Country/State of origin Timing Volume Value
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Price Data					
Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia



Table 1.33: Additional Information

Production / Price Signals:

- The crop forecasting system can provide growers with a relatively accurate forecast of industry production and timing. Growers can use this information to inform their decisions regarding the strategic timing of the release of their fruit onto the market.
- An increasing number of growers are selling their product under contract.
- Major anecdotal drivers of demand are:
 - Convenience;
 - Versatility;
 - It's a component of a "staple" diet; and
 - Taste.

Market Structure:

- Many larger growers prefer to sell under contract, predominantly to retail, as this provides security in terms of price and demand. Direct from grower to retail accounts for approximately 25% of total production.
- Approximately 10% of total production is sold from the grower to retail through a marketing agent.
- The rest of production is sold to wholesale markets.

Other Information:

- Growcom are investigating resuming production and price data collection for the banana industry.
- The ABGC is currently undertaking a satellite survey of all Queensland banana plantations. This survey will be used to identify banana plantations and ownership data, and will be updated biennially.

1.5.2 Nashi Pears

Industry Association: Australian Nashi Growers Association (ANGA)
Number of Growers: Approximately 15 to 20 key growers
Register of Growers: Have these key growers on register
Members: These growers are all members of the ANGA

Table 1.34: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per tray of fresh Nashi produced in Australia and sold (including export) by the producer Levy also payable on all juicing and processing Nashi per tonne of Nashi sold for these purposes.
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered
Cost of Production Data					
N/a					
Capital Cost Data					
N/a					

Table 1.35: Other Identified Data

Name /Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> Covers fresh Nashi imports and exports Data includes: <ul style="list-style-type: none"> Destination Country/State of origin Timing Volume Value
Retail Data AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Price Data Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.36: Additional Information

Production / Price Signals:

- There are no transparent signals to inform growers of annual production, with crop grown and placed on market as produced.

Market Structure:

Production:

- There is one major grower that produces approximately 60% to 70% of total Nashi product grown in Australia.

Market Channels:

- The majority of product is sold direct from the grower to Coles and Woolworths.
- The remainder is sold primarily to wholesale.
- There has historically been a small export market for Australian Nashi, however Taiwan (historically the major export destination for Australian Nashi) has recently closed their market to Australian Nashi products, reducing the quantity of Australian Nashi exports.

Other Information:

- Anecdotal evidence suggests the Nashi industry has undergone a period of rationalisation in recent years, with most growers winding back production or leaving the industry due to increasing costs of production. This has resulted in a reduction in supply and, subsequently, an increase in prices.

1.5.3 Papaya

Industry Association: Australian Papaya Industry Association (APIA)
Number of Growers: Not identified
Register of Growers: Register captures approximately 80% to 90% of industry
Members: Not identified

Table 1.37: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per kilogram of fresh, processing and export papaya produced in Australia and sold (including export) by the producer
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Grower Survey	Annual	Survey (Mail-out)	APIA	Not identified	<ul style="list-style-type: none"> Collects information on area planted Has a low response rate
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Cost of Production Data APIA Grower Analysis	Periodic	Consultation with growers	APIA and Queensland DPI	State	<ul style="list-style-type: none"> Data collected at grower meeting approximately every two years Collect cost of production data such as: <ul style="list-style-type: none"> Production inputs Harvesting Marketing Freight
Capital Cost Data N/a					

Table 1.38: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> Covers fresh papaya imports and exports Data includes: <ul style="list-style-type: none"> Destination Country/State of origin Timing Volume Value
Retail Data AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Price Data Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.39: Additional Information

<p>Production / Price Signals:</p> <ul style="list-style-type: none">• No formal production / price signals. <p>Market Structure:</p> <p><i>Major Markets:</i></p> <ul style="list-style-type: none">• The major market for papaya in Australia is Brisbane, followed by Sydney and Melbourne. There is also a small market for papaya in Western Australia. <p><i>Market Channels:</i></p> <ul style="list-style-type: none">• The main market channels are:<ul style="list-style-type: none">◦ Wholesale (approximately 70% of total production goes to wholesale);◦ Direct to retail, i.e. farmers markets, road side sales, etc. (approximately 5% of total production goes direct to retail); and◦ Direct to supermarkets (approximately 25% goes direct to supermarkets). <p>Other Information:</p> <ul style="list-style-type: none">• N/a
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1.5.4 Passionfruit

Industry Association: Australian Passionfruit Industry Association Inc. (APIAI)

Not identified

Number of Growers: Have a register of members

Register of Growers: Approximately 35% of growers covering approximately 50% of production

Members:

Table 1.40: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per: <ul style="list-style-type: none"> 18 litre carton of passionfruit produced in Australia and sold (including export) by the producer 8 kilogram of fresh passionfruit produced in Australia and sold unpackaged (including export) by the producer 1 tonne of processing passionfruit produced in Australia and sold (including export) by the producer
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Royalties Scheme	Not identified	Royalty payments	APIAI	Not identified	<ul style="list-style-type: none"> A royalty is paid to APIAI for each plant sold to growers This does not provide an accurate indication of production as there is no information collected regarding removal of plants
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Cost of Production Data Passionfruit Growing Guide – Is passionfruit growing for you?	Periodic	Consultation with industry	Queensland DPI	State	<ul style="list-style-type: none"> Includes cost of production data such as: <ul style="list-style-type: none"> Land preparation Planting Spraying Harvesting Sorting Packing
Capital Cost Data Passionfruit Growing Guide – Is passionfruit growing for you?	Periodic	Consultation with industry	Queensland DPI	State	<ul style="list-style-type: none"> Includes capital cost data such as: <ul style="list-style-type: none"> Trellis infrastructure Wind breaks Packing shed and grader Tractor Chemical sprayer Irrigation Cold room

Table 1.41: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data N/a					
Retail Data AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Price Data Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.42: Additional Information

<p><u>Production / Price Signals:</u></p> <ul style="list-style-type: none">• Market agents provide information to growers regarding demand for their product.• The APFIAI publish a report each year informing growers of the expected demand for products in various markets. <p><u>Market Structure:</u></p> <ul style="list-style-type: none">• Passionfruit is predominantly sold through wholesale and farmers markets.• Australian passionfruit is not exported. <p><u>Other Information:</u></p> <ul style="list-style-type: none">• N/a

1.5.5 Pineapples

Industry Association: Growcom
Number of Growers: Not identified
Register of Growers: Not identified
Members: Not identified

Table 1.43: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' for each commodity Prices of horticultural commodities collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered
Cost of Production Data					
N/a					
Capital Cost Data					
N/a					

Table 1.44: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> Covers pineapple imports and exports Data includes: <ul style="list-style-type: none"> Destination Country/State of origin Timing Volume Value
Retail Data AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Price Data Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.45: Additional Information

<p>Production / Price Signals:</p> <ul style="list-style-type: none"> Very little information available to growers. <p>Market Structure:</p> <ul style="list-style-type: none"> Not identified. <p>Other Information:</p> <ul style="list-style-type: none"> Growcom has identified the limited available data for pineapples as a key issue for the industry.
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1.5.6 Rubus

Industry Association:

Australian Rubus Growers Association (ARGA)

Number of Growers:

Not identified

Register of Growers:

Yes

Members:

Approximately 70% - 75% of all growers are members

Table 1.46: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per kilogram of fresh rubus produced in Australia and sold (including export) by the producer to wholesale markets, market agents and super markets Rubus sold for processing or direct from the grower to the consumer is exempt from the levy
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Member Survey	Periodic	Survey (Mail-out)	ARGA	Not identified	<ul style="list-style-type: none"> Survey was of members of the ARGA only <ul style="list-style-type: none"> Conducted in 2004 Prior to 2004, last survey was conducted in between 1994 and 1996 Collected information on the number of acres of production
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	<ul style="list-style-type: none"> Provides Tasmanian berry production estimates

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Price Data ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> • ABS collects price information to estimate GVP • Price data is for 'wholesale price realised in the marketplace' • Prices collected from a variety of sources, such as marketing authorities and industry sources • Timing of transactions and price variability not considered • Provides Tasmanian berry value estimates
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	
Cost of Production Data Profit Margin Analysis	Periodic	Industry consultation	ARGA	Not identified	<ul style="list-style-type: none"> • Conducted by an economist at a grower meeting held by the ARGA <ul style="list-style-type: none"> ◦ All growers that attended provided information to economist ◦ Data entered into spreadsheets ◦ Conducted last year
Capital Cost Data N/a					

Table 1.47: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> • Covers fresh rubus (aggregate of raspberries, blackberries, mulberries and loganberries) imports and exports • Data includes: <ul style="list-style-type: none"> ◦ Destination ◦ Country/State of origin ◦ Timing ◦ Volume ◦ Value
Retail Data AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Market Price Data Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> • Indicative wholesale price ranges by quality, quantity and variety • Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth • Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.48: Additional Information

Production / Price Signals:

- Prices for rubus are highly sensitive to supply – during peak supply periods the prices for rubus can drop significantly.
- Organic berries demand a price premium and generally hold their price during peak supply periods.

Market Structure:

Production:

- Rubus is sold through a wide range of markets and market channels, including:
 - Wholesale;
 - Direct to supermarket (retail);
 - Pick-your-own (direct to market);
 - Market agents; and
 - On/ off farm processing.

Processing:

- The volume of rubus sold for processing varies between season to season and is largely driven by the prices growers are receiving for fresh produce.

Other Information:

Legislation:

- The ARGA do not collect production and price data in part due to privacy laws. The ABS have legislative right to this data.

Growing Regions:

- The geographic regions of production for rubus are defined by the number of ‘chill hours’ required to produce fruit buds.
- The main growing regions are:
 - The Yarra Valley and north-east Victoria;
 - Tasmania;
 - Southern Western Australia (near Albany); and
 - Northern New South Wales.

1.5.7 Strawberries

Industry Association: Strawberries Australia Inc. (SAI)

Not identified

Number of Growers: Approximately 700 growers on register

Register of Growers: Almost all growers on the register are members

Members:

Table 1.49: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per 1,000 strawberry runners purchased in Australia for commercial production
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Queensland DPI Data	Not identified	Not identified	Queensland DPI	Not identified	<ul style="list-style-type: none"> Queensland DPI has collected some point of sale information in Queensland, primarily through its Better Berries research and marketing program
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	<ul style="list-style-type: none"> Forecasts Queensland strawberry production for current financial year and provides comparison with estimates for previous years
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	<ul style="list-style-type: none"> Provides Tasmanian strawberry production estimates
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Queensland DPI Data	Not identified	Not identified	Queensland DPI	Not identified	<ul style="list-style-type: none"> Queensland DPI has collected some point of sale information in Queensland, primarily through its Better Berries program
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	<ul style="list-style-type: none"> Forecasts Queensland strawberry prices received by producers for current financial year and provides comparison with estimates for previous years
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	<ul style="list-style-type: none"> Provides Tasmanian strawberry value estimates
Cost of Production Data					
N/a					
Capital Cost Data					
N/a					

Table 1.50: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data					
Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> Covers imports and exports of: <ul style="list-style-type: none"> Fresh strawberries Frozen strawberries Strawberries otherwise prepared or preserved, whether or not containing added sugar or other sweetening matter or spirit Data includes: <ul style="list-style-type: none"> Destination Country/State of origin Timing Volume Value
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Price Data					
Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.51: Additional Information

<p>Production / Price Signals:</p> <ul style="list-style-type: none">• There are no transparent signals to inform growers of annual production, with crop grown and placed on market as produced.• Drivers of demand are:<ul style="list-style-type: none">◦ Appearance;◦ Taste; and◦ Seasonality – strawberries don't have much competition during the winter months as tropical fruits are not in season. <p>Market Structure:</p> <p><i>Channels:</i></p> <ul style="list-style-type: none">• The majority of growers use market agents to place their product in wholesale markets.• A small proportion of growers sell direct to retail chains.• Supermarkets purchase primarily from distributors, with any shortfall purchased from wholesale markets.• Approximately 3% to 15% of total production is second grade and is sold to processors. <p><i>Distributors:</i></p> <ul style="list-style-type: none">• Australian Strawberries Distributors and Ausfresh are the main distribution companies. <p>Other Information:</p> <ul style="list-style-type: none">• N/a

1.6 Nuts

Industry Association:

Australian Nut Industry Council (ANIC)

Number of Growers:

Not identified

Register of Growers:

ANIC does not keep a register of growers. The PIBs for each of the nut industries have these

Members:

The PIBs for each of the nut industries are members of ANIC

Table 1.52: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' for each commodity Prices of horticultural commodities collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered
Cost of Production Data					
N/a					
Capital Cost Data					
N/a					

Table 1.53: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data					
N/a					
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Price Data Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.54: Additional Information

Production / Price Signals:

- Signals vary by industry, although the majority of nut production is sold under contract to major processors (thus there is a set price and quantity).
- Some of the nut industry associations publish market reports that are disseminated to growers.

Market Structure:

- Market structure varies by industry.

Other Information:

- ANIC is a federation of the seven member nut industry associations. Typically, in the past, data collection has been undertaken by these associations for their respective industries. See the respective industry summaries for data collected by these associations.
- ANIC are in the process of collating the following information across all nut industries:
 - Plantings (trees by variety, age);
 - Acreage;
 - Tonnages (production);
 - Exports;
 - Imports;
 - Consumption; and
 - Indicative price.
- Aside from almonds and macadamias there is little information collected for the nut industry.

1.6.1 Almonds

Industry Association: Almond Board of Australia (ABA)

Number of Growers: Approximately 175

Register of Growers: Estimated to have 98% of all growers

Members: Approximately 80% of growers are members

Table 1.55: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable on almonds produced in Australia and are either sold (including export) or used by the producer Includes almonds in shell, shelled almonds and almonds of the Nonpareil variety (in shell)
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Data from Processors	Ongoing	Provided by processors	ABA	Not identified	<ul style="list-style-type: none"> Processors purchase the majority of almonds produced Captures approximately 98% of production All sales volume data provided by major processors to the ABA
Survey of Plantings	Annual	Survey (Mail-out)	ABA	Regional	<ul style="list-style-type: none"> Annual survey of members (began in 2005) Captures plantings data by: <ul style="list-style-type: none"> Variety Age of tree Spacing and Location Stored in a database which is updated annually to account for new plantings and removals Can be used to estimate and predict production

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Price Data ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> • ABS collects price information to estimate GVP • Price data is for 'wholesale price realised in the marketplace' • Prices collected from a variety of sources, such as marketing authorities and industry sources • Timing of transactions and price variability not considered
Major Processors	Ongoing	Contracts with growers	Major processors	Not identified	<ul style="list-style-type: none"> • 4 major processors purchase approximately 98% of all produce <ul style="list-style-type: none"> ◦ Buy predominantly under contract (approx. 90%) and thus have price data • Data not passed onto industry
ABA Economic/Profitability Analysis	Periodic	Not identified (undertaken by external consultant)	Research project	National	<ul style="list-style-type: none"> • Economic/profitability analysis benchmarking the profitability of three different sized farms • Conducted in 1998, and is currently being updated • Price data collected/used as part of analysis • Accuracy of study not known
Cost of Production Data ABA Economic/Profitability Analysis	Periodic	Not identified (undertaken by external consultant)	Research project	National	<ul style="list-style-type: none"> • Economic/profitability analysis benchmarking the profitability of three different sized farms • Conducted in 1998, and is currently being updated • Cost of production data collected/used as part of analysis • Accuracy of study not known
Capital Cost Data ABA Economic/Profitability Analysis	Periodic	Not identified (undertaken by external consultant)	Research project	National	<ul style="list-style-type: none"> • Economic/profitability analysis benchmarking the profitability of three different sized farms • Conducted in 1998, and is currently being updated • Capital cost data collected/used as part of analysis • Accuracy of study not known

Table 1.56: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data Processor Export Data	Ongoing	Provided by processors	ABA	Not identified	<ul style="list-style-type: none"> • Data provided by four major processors • Estimated to capture approximately 75% of all exports • Data is captured in terms of quantity, not value
Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> • Covers in shell and shelled almond imports/exports • Data includes: <ul style="list-style-type: none"> ◦ Destination ◦ Country/State of origin ◦ Timing ◦ Volume ◦ Value

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Price Data					
Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.57: Additional Information

<p>Production / Price Signals:</p> <ul style="list-style-type: none"> Around 90% of total almond production is sold under contract to the major processors (thus setting price and quantity). The ABA releases a number of marketing documents for growers, marketers and processors that informs them of trends in: <ul style="list-style-type: none"> Production; Varieties; Sales; and Plantings. Results from the "Survey of Plantings" are disseminated to industry in the annual Australian Almonds Planting Report. <p>Market Structure:</p> <p><i>Market:</i></p> <ul style="list-style-type: none"> Approximately 90% of total production is sold direct from the growers to the processors The other 10% is sold through market <p><i>Exports:</i></p> <ul style="list-style-type: none"> Approximately 30% of total production is exported direct from the processors It is estimated that approximately a further 10% of total production is exported through other channels <p><i>End Product:</i></p> <ul style="list-style-type: none"> Approximately 70% of total production is sold as whole products (e.g. nut in shell, roasted whole nuts, etc.) The residual volume (approximately 30%) are sold as inputs to other products and further processing (e.g. puree, ingredients for other food products) <p>Other Information:</p> <ul style="list-style-type: none"> N/a

1.6.2 Chestnuts

Industry Association: Chestnut Growers of Australia (CGA)

Number of Growers: Approximately 400

Register of Growers: Have a register of approximately 120 members

Members: Approximately 120 members

Table 1.58: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per kilogram of chestnuts produced in Australia and sold (including export) by the producer Anecdotal evidence suggests the levy captures approximately 70% of production
Membership Application/Renewal	Annual	Membership application/ renewal form	CGA	Not identified	<ul style="list-style-type: none"> Membership form requests information regarding number of trees planted by variety and age Have less than a third of total growers as members, thus is only a small sample of growers being asked for this information Only a small proportion of members fill in this section of the membership form
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Cost of Production Data CGA Breakeven Analysis	Periodic	Consultation with industry	CGA	Not identified	<ul style="list-style-type: none"> • Analysis conducted in 1999 • Included cost of production information for the following: <ul style="list-style-type: none"> ◦ Marking out ◦ Herbicides ◦ Ripping ◦ Liming ◦ Planting ◦ Seeding ◦ Mowing ◦ Mulching ◦ Harvesting
Capital Cost Data CGA Breakeven Analysis	Periodic	Consultation with industry	CGA	Not identified	<ul style="list-style-type: none"> • Analysis conducted in 1999 • Included capital cost information for the following: <ul style="list-style-type: none"> ◦ Irrigation ◦ Shed ◦ Grader ◦ Cool room

Table 1.59: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> • Covers fresh chestnut imports and exports • Data includes: <ul style="list-style-type: none"> ◦ Destination ◦ Country/State of origin ◦ Timing ◦ Volume ◦ Value
Retail Data AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Market Price Data Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> • Indicative wholesale price ranges by quality, quantity and variety • Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth • Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.60: Additional Information

Production / Price Signals:

- There are no transparent signals to inform growers of annual production, with crop grown and placed on market as produced.
- Major drivers of consumption include:
 - Seasonality – price and demand for chestnuts is generally higher in colder months
 - Consistency – The quality of chestnuts can vary between variety and growing technique. Consumers are unwilling to pay premium prices for inconsistent quality products.
 - Ethnicity – chestnuts are more highly favoured by non-Anglo-Saxon cultures, particularly Asian cultures. As a result, the level of ethnicity in a market can influence demand.
 - Convenience – the trend towards convenience food is an emerging issue for the chestnut industry, as chestnuts are generally sold in shell and are a time consuming product to eat.

Market Structure:

Major Markets:

- The major markets for chestnuts in Australia are in Sydney and Melbourne. Adelaide also has a small market.

Production:

- Approximately 80% of total chestnuts produced are sold through wholesale markets.
- Approximately 15% of total chestnuts produced are sold at farmers markets.
- There is one grower that sells direct to supermarkets.
- Approximately 3% to 4% of total chestnut production is exported.
- Approximately 1% to 2% of total chestnut production is sold for processing.

Exports:

- Approximately 80% of total processed chestnuts are exported to Japan.
- There is not much demand for Australian chestnuts overseas as the major markets are in the Northern Hemisphere, meaning that Australian chestnuts are available out of season.

Contract Arrangements:

- Most growers do not sell under contractual arrangements.
- Most growers prefer to sell their product through one wholesaler.

Other Information:

- There are approximately 10 key wholesalers in the chestnut industry.
- There is one major processor and one smaller processor in the chestnut industry.

1.6.3 Macadamias

Industry Association: Australian Macadamia Society Ltd (AMS)
Number of Growers: Approximately 900 growers
Register of Growers: Not identified
Members: Not identified

Table 1.61: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Monthly	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable on macadamias produced in Australia and are either sold (including export) or used by the producer Includes macadamias in shell and dried kernels Anecdotal evidence suggests the levy covers approximately 99% of macadamia production
AMS Grower Survey	Biennial	Survey (Mail-out)	AMS	Regional	<ul style="list-style-type: none"> Survey question fields include: <ul style="list-style-type: none"> Tree numbers Variety Age Approximately 70% response rate Between surveys, nurseries periodically provide information regarding plant sales to update tree estimates Combined with seasonal/climate data, this information is used to produce production forecasts
MacMan	Ongoing	Data inputted into MacMan program by growers	Growers	Regional	<ul style="list-style-type: none"> Captures a wide range of farm management data, including: <ul style="list-style-type: none"> Plantings Production Approximately 20% of growers use MacMan
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	<ul style="list-style-type: none"> Forecasts Queensland macadamia production for current financial year and provides comparison with estimates for previous years

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> • ABS collects price information to estimate GVP • Price data is for 'wholesale price realised in the marketplace' • Prices collected from a variety of sources, such as marketing authorities and industry sources • Timing of transactions and price variability not considered • Processors purchase approximately 99% of all produce <ul style="list-style-type: none"> ◦ Buy predominantly under contract and thus have price data ◦ Data not passed onto industry • Captures a wide range of farm management data, including: <ul style="list-style-type: none"> ◦ Value ◦ Approximately 20% of growers use MacMan • Forecasts Queensland macadamia prices received by producers for current financial year and provides comparison with estimates for previous years
Processor Price Data	Annual	Contracts with growers	Processors	Not identified	
MacMan	Ongoing	Data inputted into MacMan program by growers	Growers	Regional	
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	
Cost of Production Data					
MacMan	Ongoing	Data inputted into MacMan program by growers	Growers	Regional	<ul style="list-style-type: none"> • Captures a wide range of farm management data, including: <ul style="list-style-type: none"> ◦ Production costs ◦ Approximately 20% of growers use MacMan • Includes cost of production data such as: <ul style="list-style-type: none"> ◦ Chemical spraying ◦ Pruning ◦ Harvesting ◦ Mulching ◦ Fertiliser ◦ Crop management ◦ Marketing • Can be used for benchmarking purposes • Provides benchmark return on capital over a 20 year life-cycle for a macadamia farm
NSW DPI Gross Margin Analysis	Periodic	Consultation with industry	NSW DPI	Northern Rivers Region	
NSW DPI 'Whole-of-Life-Cycle' Returns Model	Periodic	Consultation with industry	NSW DPI	N/a	
Capital Cost Data					
NSW DPI 'Whole-of-Life-Cycle' Returns Model	Periodic	Consultation with industry	NSW DPI	N/a	<ul style="list-style-type: none"> • Provides benchmark return on capital over a 20 year life-cycle for a macadamia farm

Table 1.62: Other Identified Data

Name /Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data					
Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> Covers in shell and shelled macadamia imports/exports Data includes: <ul style="list-style-type: none"> Destination Country/State of origin Timing Volume Value
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Price Data					
Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.63: Additional Information

Production / Price Signals:

- The Australian Macadamia Society produces a bi-monthly newsletter as well as monthly update reports that provide growers with market updates.
- The majority of macadamia production is sold under one year contracts to the major processors (thus there is a set price and quantity).

Market Structure:

- Approximately 99% of total production is sold direct from the growers to the processors.
- The other 1% is sold in farmers markets as nut in shell.
- From the processor there is anecdotal evidence as to which markets the product is sold to, however the processors don't currently quantify this information publicly.

Other Information:

- AMS are looking to implement a similar processor dispatch system to the one used by Avocados Australia in the near future.

1.6.4 Pistachios

Industry Association: Pistachio Growers Association (PGA)

Approximately 30-40 growers

Register of Growers: PGA has a register of members, with approximately 30 active growers that account for approximately 99% of total production

Members: There are approximately 30 growers with membership

Table 1.64: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
APPC Data	Annual	APPC records	APPC	Not identified	<ul style="list-style-type: none"> APPC are the sole packing company for pistachios, accounting for approximately 99% of production APPC are a central capture point for pistachio production data Data compiled on a seasonal basis (i.e. annual)
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered
APPC Data	Annual	APPC records	APPC	Not identified	<ul style="list-style-type: none"> APPC are the sole packing company for pistachios, accounting for approximately 99% of production APPC are a central capture point for pistachio price data Have records of both prices paid and received <ul style="list-style-type: none"> Can provide value data at both the farm gate and post packaging/ processing (have done so in the past) Data compiled on a seasonal basis (i.e. annual)

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Cost of Production Data Economic Analysis	Periodic (one off)	Not identified	Not identified	Not identified	<ul style="list-style-type: none"> • Cost of production analysis conducted in mid-1990s • Anecdotal evidence suggests that industry considered this analysis accurate at the time • Included cost of production data such as: <ul style="list-style-type: none"> ◦ Planting ◦ Spraying ◦ Pruning ◦ Harvesting ◦ Mulching ◦ Fertiliser ◦ Crop management
Capital Cost Data Economic Analysis	Periodic (one off)	Not identified	Not identified	Not identified	<ul style="list-style-type: none"> • Cost of production analysis conducted in mid-1990s • Anecdotal evidence suggests that industry considered this analysis accurate at the time • Included cost of infrastructure

Table 1.65: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> • Covers fresh pistachio imports and exports • Data includes: <ul style="list-style-type: none"> ◦ Destination ◦ Country/State of origin ◦ Timing ◦ Volume ◦ Value
Retail Data AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Market Price Data Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> • Indicative wholesale price ranges by quality, quantity and variety • Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth • Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.66: Additional Information

<p>Production / Price Signals:</p> <ul style="list-style-type: none">• There are no transparent signals to inform growers of annual production, with crop grown and placed on market as produced.• Trees take six years to yield a commercial crop. Once they are planted there is little the grower can do to influence production, size and variety. <p>Market Structure:</p> <ul style="list-style-type: none">• The Australian Pioneer Pistachio Company (APPC) act as an agent for approximately 99% of all production.• The APPC are a packing / processing company.• The remaining 1% is sold in hull (not roasted). <p>Other Information:</p> <ul style="list-style-type: none">• The APPC is the major processor in the pistachio industry.
--

1.6.5 Walnuts

Industry Association: Australian Walnut Industry Association (AWIA)

Approximately 125

Register of Growers: Have a register of members, accounting for approximately 80% of growers

Members: Approximately 80% of growers are members

Table 1.67: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries Membership form requests information regarding number of trees planted by variety
Membership Application/Renewal	Annual	Membership application/ renewal form	AWIA	Not identified	
AWIA Member Survey	Periodic	Survey (Mail-out)	AWIA	Not identified	<ul style="list-style-type: none"> Survey conducted 5 to 6 years ago Requested information regarding production Had very low response rate and as such has not been repeated
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered
AWIA Member Survey	Periodic	Survey (Mail-out)	AWIA	Not identified	<ul style="list-style-type: none"> Survey conducted 5 to 6 years ago Requested information regarding prices received Had very low response rate and as such has not been repeated



Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Cost of Production Data RIRDC Financial Analysis	Periodic (one off)	Consultation with industry	RIRDC	State	<ul style="list-style-type: none"> Analysis conducted in 1999 as part of a Rural Industries Research & Development Corporation (RIRDC) project Costs of production reported include: <ul style="list-style-type: none"> Seed / stock Water Soil preparation Fertiliser Chemicals and spraying Harvesting Maintenance Disposal Permits
Capital Cost Data RIRDC Financial Analysis	Periodic (one off)	Consultation with industry	RIRDC	State	<ul style="list-style-type: none"> Analysis conducted in 1999 as part of a Rural Industries Research & Development Corporation (RIRDC) project Initial investment costs reported include: <ul style="list-style-type: none"> Land (purchase / lease and field investigations) Building infrastructure Machinery Irrigation Crop protection (trellises, fences, etc.)

Table 1.68: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> Covers in shell and shelled walnut imports/exports Data includes: <ul style="list-style-type: none"> Destination Country/State of origin Timing Volume Value
Retail Data AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Market Data AWIA Member Survey	Periodic	Survey (Mail-out)	AWIA	Not identified	<ul style="list-style-type: none"> Survey conducted 5 to 6 years ago Requested information regarding tonnages sold and prices received by market Had very low response rate and as such has not been repeated
Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 1.69: Additional Information

Production / Price Signals:

- There are no transparent signals to inform growers of annual production, with crop grown and placed on market as produced.

Market Structure:

Production:

- Most walnut producers prefer to sell fresh "nut-in-shell" in local markets in order to receive a price premium.
- Approximately 15%-20% of walnuts are of insufficient quality to sell nut-in-shell. These are typically sold to processors.

Markets:

- The majority of walnuts are sold at either farmers markets or direct to local grocers.

Other Information:

- AWIA historically produced a brochure providing indicative cost of production information. However, this has been ceased as the AWIA believe that this did not accurately represent the highly variable costs of production between locations and management technique in the walnut industry.

1.7 Processed Fruits and Nuts

1.7.1 Canned Fruits

Industry Association: Canned Fruit Industry Council of Australia (CFICA)
Number of Growers: There is one major processor
Register of Growers: There is one major processor
Members: Not identified

Table 1.70: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Processor Data	Ongoing	Processor records	SPC	Not identified	<ul style="list-style-type: none"> SPC, the major processor in the canned fruit industry, maintains its own records of production Some of this data is provided to the CFICA periodically to assist in strategic industry planning
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered
Processor Data	Ongoing	Processor records	SPC	Not identified	<ul style="list-style-type: none"> SPC, the major processor in the canned fruit industry, maintains its own records of price Some of this data is provided to the CFICA periodically to assist in strategic industry planning

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Cost of Production Data					
N/a					
Capital Cost Data					
N/a					

Table 1.71: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data					
Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> Covers preserved fruit imports and exports Data includes: <ul style="list-style-type: none"> Destination Country/State of origin Timing Volume Value
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Price Data					
Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia



Table 1.72: Additional Information

<p><u>Production / Price Signals:</u></p> <ul style="list-style-type: none">• N/a <p><u>Market Structure:</u></p> <ul style="list-style-type: none">• Approximately 50%-60% of canned fruit produced in Australia is exported. <p><u>Other Information:</u></p> <ul style="list-style-type: none">• SPC is the major processor for canned fruits, accounting for nearly all canned fruit produced in Australia.• SPC compiles its own information regarding price, production and market distribution from in-house records and stores this information privately.
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1.7.2 Dried Fruit

Industry Association: Australian Dried Fruits Association (ADFA)
Number of Growers: Not identified
Register of Growers: Not identified
Members: Not identified

Table 1.73: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Vineyards Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers: <ul style="list-style-type: none"> All farms classified under ANZSIC code 0114 (grape growing) Farms specifically marked for inclusion Farms that identify area grown to viticulture during the Agricultural Census or Surveys Data collected on production of grapes grown for drying by variety
Levy	Monthly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per tonne of dried fruit produced in Australia and sold (including export) by the producer Levy is split into: <ul style="list-style-type: none"> Dried tree fruit (levied annually) Dried vine fruit (levied monthly and annually)
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Processor Data	Ongoing	Processor records	Sunbeam	Not identified	<ul style="list-style-type: none"> Approximately 95% of all Australian dried fruit is sold to two processors (Sunbeam and Clyne Foods) Sunbeam and Clyne Foods maintain their own records of sales, including production Production data is not currently publicly released

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Price Data ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> • ABS collects price information to estimate GVP • Price data is for 'wholesale price realised in the marketplace' • Prices collected from a variety of sources, such as marketing authorities and industry sources • Timing of transactions and price variability not considered
Processor Data	Ongoing	Processor records	Sunbeam	Not identified	<ul style="list-style-type: none"> • Approximately 95% of all Australian dried fruit is sold to two processors (Sunbeam and Clyne Foods) • Sunbeam and Clyne Foods maintains their own records of sales, including price • A publicly available price schedule is released in late January, which is used as a reference point for determining sales prices
Cost of Production Data Benchmarking Report	Biennial	Survey of growers	External consultant	N/a	<ul style="list-style-type: none"> • Benchmarks financial performance of dried fruit growing operations • Includes operating costs such as: <ul style="list-style-type: none"> ◦ Labour ◦ Electricity ◦ Fuel ◦ Water charges ◦ Pest and disease management ◦ Fertiliser ◦ Machinery repairs and maintenance
Capital Cost Data Benchmarking Report	Biennial	Survey of growers	External consultant	N/a	<ul style="list-style-type: none"> • Benchmarks financial performance of dried fruit growing operations • Includes capital costs such as: <ul style="list-style-type: none"> ◦ Depreciation ◦ Interest costs

Table 1.74: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> • Covers apple and pear imports and exports • Data includes: <ul style="list-style-type: none"> ◦ Destination ◦ Country/State of origin ◦ Timing ◦ Volume ◦ Value



Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Retail Data AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category

Table 1.75: Additional Information

<p>Production / Price Signals:</p> <ul style="list-style-type: none"> Sunbeam and Clyne Foods produce pricing schedules in late January which provides a matrix for price by quality. Approximately 40% to 50% of growers sell their product to processors under contract, setting the price received. <p>Market Structure:</p> <ul style="list-style-type: none"> Approximately 80% of fruit grown for drying is sold to Sunbeam, Australia's major dried fruit processor. Approximately 15% of fruit grown for drying is sold to Clyne Foods. <p>Other Information:</p> <ul style="list-style-type: none"> N/a
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2. Vegetables

2.1 Mushrooms

2.1.1 Mushrooms

Industry Association:

Australian Mushroom Growers Association (AMGA)

Number of Growers:

There are 92 commercial growers

Register of Growers:

Not identified

Members:

Not identified

Table 2.1: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Monthly & Quarterly	Collected on sale of spawn	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per kilogram of mushroom spawn purchased in Australia for commercial production
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
AMGA Annual Production Survey	Annual	Survey (Mail-out and phone)	AMGA	Regional	<ul style="list-style-type: none"> Sent to all known mushroom growers Captures the following productivity data: <ul style="list-style-type: none"> Production (tonnage) Spawning rate Yield (kilograms of mushrooms per sqm) Crops per shed Cropping rate Picking rate ABS and HAL recognise survey as accurate

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	<ul style="list-style-type: none"> Forecasts Queensland mushroom production for current financial year and provides comparison with estimates for previous years
Price Data ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered Forecasts Queensland mushroom prices received by producers for current financial year and provides comparison with estimates for previous years
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	
Cost of Production Data					
N/a					
Capital Cost Data					
N/a					

Table 2.2: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> Covers mushroom (<i>Agaricus</i>) imports and exports and speciality mushroom imports Data includes: <ul style="list-style-type: none"> Destination Country/State of origin Timing Volume Value
Retail Data AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Market Price Data Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> • Indicative wholesale price ranges by quality, quantity and variety • Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth • Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 2.3: Additional Information

Production / Price Signals:

- The AMGA has funded extensive market research over the past 15 years, providing the industry with a clear understanding of consumer preferences and quality requirements.

Market Structure:

Market Channels:

- Approximately 55% of total mushroom production is sold direct from the grower to major retail chains.
- The rest of production is sold through wholesale.

Final Point of Sale:

- Approximately 75% of total mushrooms produced are sold to the consumer via retail.
- Approximately 20% of total mushrooms produced are sold to the consumer via food services.
- Approximately 5% of total mushrooms produced are processed.

Retail:

- Approximately 85% of all mushrooms sold at retail are sold loose.
- The other 15% are sold in pre packs.

Production:

- The three largest mushroom producers account for approximately 50% of total production.
- The five largest mushroom producers account for approximately 60% of total production.
- The thirteen largest mushroom producers account for approximately 75% of total production.

Other Information:

- N/a

2.2 Onions

2.2.1 Onions

Industry Association: Australian Onion Industry Association (AOIIA)
Number of Growers: Not identified
Register of Growers: Not identified
Members: Not identified

Table 2.4: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per tonne of hard onions produced in Australia and sold (including export) by the producer
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Stock Survey	Tri-annual	Consultation with growers	State representatives	Regional	<ul style="list-style-type: none"> Collects information on: <ul style="list-style-type: none"> Tonnes stored Tonnes harvested Hectares planted Survey conducted before every meeting (three meetings a year) All known growers are surveyed Results are disseminated to members only
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	<ul style="list-style-type: none"> Provides Tasmanian onion production estimates

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> • ABS collects price information to estimate GVP • Price data is for 'wholesale price realised in the marketplace' • Prices collected from a variety of sources, such as marketing authorities and industry sources • Timing of transactions and price variability not considered • Provides Tasmanian onion value estimates
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	
Cost of Production Data					
N/a					
Capital Cost Data					
N/a					

Table 2.5: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data					
Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> • Covers imports and exports of fresh or chilled (aggregate): <ul style="list-style-type: none"> ◦ Brown onions ◦ Other onions ◦ Shallots • Data includes: <ul style="list-style-type: none"> ◦ Destination ◦ Country/State of origin ◦ Timing ◦ Volume ◦ Value
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Market Price Data					
Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> • Indicative wholesale price ranges by quality, quantity and variety • Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth • Data available for all fruit and vegetable commodities sold through wholesale channels in Australia



Table 2.6: Additional Information

<p>Production / Price Signals:</p> <ul style="list-style-type: none">• The AOTIA do not provide growers with any information to assist in production decisions. <p>Market Structure:</p> <ul style="list-style-type: none">• Not identified. <p>Other Information:</p> <ul style="list-style-type: none">• N/a

2.3 Potatoes

2.3.1 Fresh Potatoes

Industry Association: Australian Vegetable and Potato Growers Federation (AUSVEG)

Number of Growers: Not identified

Register of Growers: AUSVEG does not have a list of growers. The State bodies will likely have these lists

Members: AUSVEG are a federation of organizations and don't have any grower members

Table 2.7: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Currently only 14 vegetables are included as separate items in the Agricultural Census AUSVEG are funding an extension of the Agricultural Census to cover an expanded list of vegetables
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries Currently only 14 vegetables are included as separate items in the Agricultural Survey (one of which is potatoes) AUSVEG are funding an extension of the Agricultural Survey to cover an expanded list of vegetables
Levy	Quarterly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per tonne of unprocessed potatoes produced in Australia and sold (including export) by the producer
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	<ul style="list-style-type: none"> Forecasts Queensland potato production for current financial year and provides comparison with estimates for previous years

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	<ul style="list-style-type: none"> Provides Tasmanian fresh potato production estimates
Price Data ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered Forecasts Queensland potato prices received by producers for current financial year and provides comparison with estimates for previous years Provides Tasmanian fresh potato value estimates
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	
Cost of Production Data ABARE Whole of Farm Viability Assessment	Periodic	Survey	ABARE	Regional	<ul style="list-style-type: none"> Survey conducted last year collected some cost of production data for: <ul style="list-style-type: none"> 6 vegetables (including potatoes) 4 regions This survey is being conducted again this year, and AUSVEG have applied for funding to continue the survey for a further three years
Capital Cost Data ABARE Whole of Farm Viability Assessment	Periodic	Survey	ABARE	Regional	<ul style="list-style-type: none"> Survey conducted last year collected some cost of production data for: <ul style="list-style-type: none"> 6 vegetables (including potatoes) 4 regions This survey is being conducted again this year, and AUSVEG have applied for funding to continue the survey for a further three years

Table 2.8: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> Covers imports and exports of: <ul style="list-style-type: none"> Seed potatoes Other potatoes (fresh or frozen) Data includes: <ul style="list-style-type: none"> Destination Country/State of origin Timing Volume Value

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Price Data					
Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 2.9: Additional Information

Production / Price Signals:

- AUSVEG publish commodity reports and import / export information that provide limited information to assist production decisions.

Market Structure:

- Not identified.

Other Information:

- AUSVEG believe that data from seed companies could be used as a proxy for future production.

2.3.2 Processed Potatoes

Industry Association: Potato Processors Association of Australia (PPAA)

Number of Growers: Not identified

Register of Growers: Not identified

Members: Have a register of members, many of which are international members that import to Australia or use Australian potatoes for processing

Table 2.10: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per tonne of processed potatoes produced in Australia and sold (including export) by the producer
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	<ul style="list-style-type: none"> Provides Tasmanian processed potato production estimates
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	<ul style="list-style-type: none"> Provides Tasmanian processed potato value estimates
Cost of Production Data					
N/a					

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Capital Cost Data					
N/a					

Table 2.1.1: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data					
Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> Covers imports and exports of: <ul style="list-style-type: none"> Preserved potatoes other than by vinegar (frozen) Preserved potatoes other than by vinegar (not frozen) Data includes: <ul style="list-style-type: none"> Destination Country/State of origin Timing Volume Value
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Price Data					
Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia



Table 2.12: Additional Information

<p><u>Production / Price Signals:</u></p> <ul style="list-style-type: none">• N/a <p><u>Market Structure:</u></p> <ul style="list-style-type: none">• Majority of processed potato production is sold retail• Only a small proportion of processed potato products are exported• There is a large volume of imports of processed potato products <p><u>Other Information:</u></p> <ul style="list-style-type: none">• The PPAA's focus is primarily on assisting processed potato businesses address issues relating to potatoes and potato processing. The PPAA does not collect any data.
--

2.4 Tomatoes

2.4.1 Processed Tomatoes

Industry Association: Australian Processing Tomatoes Research Council (APTRC)

Number of Growers: Not identified

Register of Growers: 23 growers and 2 processors, accounting for more than 95% of all processed tomato production in Australia

Members: 23 growers and 2 processors

Table 2.13: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Processor Data	Ongoing	Processor records	Processors	State (Vic)	<ul style="list-style-type: none"> The two major processors provide production data to the APTRC from their own records of production
APTRC Grower Interviews	Annual	Interviews with growers	APTRC	Victoria and NSW	<ul style="list-style-type: none"> Growers interviewed on an annual basis at their farms to obtain plantings data, including: <ul style="list-style-type: none"> Hectares planted Variety
Industry Survey	Annual	Survey	APTRC	Not identified	<ul style="list-style-type: none"> Survey requests information regarding yields Survey recently restarted

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Price Data ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> • ABS collects price information to estimate GVP • Price data is for 'wholesale price realised in the marketplace' • Prices collected from a variety of sources, such as marketing authorities and industry sources • Timing of transactions and price variability not considered • The two major processors maintain their own records of sales, including prices paid and received • Data is not currently made publicly available
Processor Data	Ongoing	Processor records	Processors	Not identified	
Cost of Production Data Input Requirements	Periodic	Consultation with industry	APTRC	Not identified	<ul style="list-style-type: none"> • Information on the quantity of diesel and water required to produce processing tomatoes has been collected by the APTRC
APTRC Estimates	Periodic	Consultation with industry	APTRC	Not identified	<ul style="list-style-type: none"> • The APTRC have estimates of costs of production based on informal discussions with growers • These are based on grower estimates rather than on hard statistical data
Capital Cost Data APTRC Estimates	Periodic	Consultation with industry	APTRC	Not identified	<ul style="list-style-type: none"> • The APTRC have estimates of capital costs based on informal discussions with growers • These are based on grower estimates rather than on hard statistical data

Table 2.14: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> • Covers imports and exports of: <ul style="list-style-type: none"> ◦ Tomatoes, whole or in pieces, preserved other than in vinegar or acetic acid ◦ Tomatoes, other, preserved other than in vinegar or acetic acid ◦ Tomato juice • Data includes: <ul style="list-style-type: none"> ◦ Destination ◦ Country/State of origin ◦ Timing ◦ Volume ◦ Value
Retail Data AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Price Data Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 2.15: Additional Information

Production / Price Signals:

- Growers sell their product to the processors under contract. The processors inform the growers of the quantity that they require each season.
- There is a payment scheme in place between growers and processors for processing tomatoes informing growers of the prices they will receive for certain quality levels of product.

Market Structure:

Industry Size:

- Processing tomatoes has relatively few industry participants, with 23 growers producing under contract for two major processors.

Channels:

- One of the processors sells processed tomato products direct to supermarket.

- The other processor sells processed tomato products as an input for downstream processed products.

Exports:

- Approximately 10% of total production is exported.

Other Information:

- There are two major processors in the processed tomatoes industry.

2.5 Other Vegetables

2.5.1 Asparagus

Industry Association: Australian Asparagus Council (AAC)
Number of Growers: Approximately 65-70 growers
Register of Growers: Have 61 growers on register
Members: Not identified

Table 2.16: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered
Cost of Production Data					
N/a					
Capital Cost Data					
N/a					

Table 2.17: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data					
Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> Covers fresh asparagus imports and exports Data includes: <ul style="list-style-type: none"> Destination Country/State of origin Timing Volume Value
Export Company Data	Periodical	Company records	Export companies	Not identified	<ul style="list-style-type: none"> There are two major export companies for asparagus, accounting for nearly all exports of asparagus in Australia Export data has been provided by these two companies to the AAC in the past
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Price Data					
Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia



Table 2.18: Additional Information

<p>Production / Price Signals:</p> <ul style="list-style-type: none">• There are no transparent signals to inform growers of annual production, with crop grown and placed on market as produced.• The AAC's funding is spent on marketing and promoting of the asparagus product grown. <p>Market Structure:</p> <p><i>Market Channels:</i></p> <ul style="list-style-type: none">• Asparagus is sold through a diverse range of channels, including:<ul style="list-style-type: none">◦ Retail;◦ Wholesale;◦ Export; and◦ Farmers market.• The split between these channels is unknown.• Many growers have their own, on farm pack-houses. <p><i>Exports:</i></p> <ul style="list-style-type: none">• There are two major export companies that account for the majority of asparagus exports. <p>Other Information:</p> <ul style="list-style-type: none">• There are a large number of first points of sale in the asparagus industry (approximately 50), which makes data collection logistically difficult for this industry.
--

2.5.2 Garlic

Industry Association:

Australian Garlic Industry Association (AGIA)

Number of Growers:

Not identified

Register of Growers:

No

Members:

Members register considered unreliable

Table 2.19: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Annual Databank Update	Annual	Survey (Mail-out)	AGIA	Regional	<ul style="list-style-type: none"> Designed to capture information on plantings, production and destination Sent to growers listed on the member register Has a very low response rate and, coupled with the low number of growers that have membership, this is considered to be highly unreliable data
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers Under this statute, a state levy was in place based on value of production Wholesalers did not need to verify the accuracy of the data they provided Anecdotal evidence suggests that data obtained from the state levy was not accurate
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered
Cost of Production Data					
N/a					
Capital Cost Data					
N/a					

Table 2.20: Other Identified Data

Name /Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data					
Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> Covers fresh or chilled (aggregate) garlic imports and exports Data includes: <ul style="list-style-type: none"> Destination Country/State of origin Timing Volume Value
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Price Data					
Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> Indicative wholesale price ranges by quality, quantity and variety Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 2.21: Additional Information

- Production / Price Signals:**
- The majority of sales are low volume, local sales of boutique varieties of garlic.

Market Structure:

Production:

- There are not many large garlic producers in Australia due to the openness of the market and inability of Australian producers to compete with major producers such as China.
 - A large proportion of Australian garlic growers are local producers with a small area devoted to boutique varieties of garlic.
- Destination of Product:*
- Most local producers sell at local markets.
 - The Annual Databank Update (survey) asks members for information regarding the destination of the product from the grower (i.e. local market, wholesale, sub contract, export, seed, green shoots, processor, etc.).
 - Given the low number of responses and low level of membership, this information is not considered to be an accurate representation of the actual market structure.

Other Information:

- N/a

2.5.3 Other Vegetables

Industry Association: Australian Vegetable and Potato Growers Federation (AUSVEG)

Not identified

Number of Growers: AUSVEG does not have a list of growers. The State bodies maintain these lists

Register of Growers: AUSVEG are a federation of organisations and as such don't have individual grower members

Members:

Table 2.22: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Only 14 vegetables were included as separate items in the 2001 Agricultural Census AUSVEG (and HAL) funded an extension of the 2006 Agricultural Census to cover an expanded list of vegetables and production techniques
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries Prior to 2006, only 14 vegetables were included as separate items in the Agricultural Survey AUSVEG are funding an extension of the 2007 Agricultural Survey to cover an expanded list of vegetables and production techniques, as per the 2006 Agricultural Census AUSVEG are applying for funding from HAL to continue the expanded range of questions in the Agricultural Survey for a further three years

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Levy	Quarterly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> • Levy is payable per: <ul style="list-style-type: none"> ◦ Dollar of gross sale value at first point of sale for vegetables produced in Australia and sold in Australia ◦ Dollar of free on board value for vegetables produced in Australia and exported • Levy and export charge is not payable on: <ul style="list-style-type: none"> ◦ Asparagus ◦ Garlic ◦ Hard onions ◦ Herbs (other than fresh culinary shallots and parsley) ◦ Melons ◦ Mushrooms ◦ Potatoes (other than sweet potatoes) ◦ Seed sprouts ◦ Tomatoes • Hard onions, mushrooms and potatoes are levied separately
State Levy	Annual (abolished in 2003)	Wholesalers provided information	Growcom	Not identified	<ul style="list-style-type: none"> • Prior to 2003 a statute existed for mandatory membership to the Queensland Fruit and Vegetable Growers (QFVG, now Growcom) for all Queensland fruit and vegetable growers • Under this statute, a state levy was in place based on value of production • Wholesalers did not need to verify the accuracy of the data they provided • Anecdotal evidence suggests that data obtained from the state levy was not accurate
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	<ul style="list-style-type: none"> • Forecasts Queensland production for current financial year and provides comparison with estimates for previous years for the following industries: <ul style="list-style-type: none"> ◦ Beans ◦ Capsicum ◦ Lettuce ◦ Sweet corn ◦ Tomatoes

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	<ul style="list-style-type: none"> • Provides Tasmanian production estimates for the following industries: <ul style="list-style-type: none"> o Carrots o Lettuce o Broccoli o Greenhouse vegetables o Broad beans o French beans o Runner beans o Cauliflowers o Brussel sprouts o Green peas o Tomatoes o Parsnips o Swedes o Pumpkin o Zucchini o Celery o Sweet corn o Cabbages
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> • ABS collects price information to estimate GVP • Price data is for 'wholesale price realised in the marketplace' • Prices collected from a variety of sources, such as marketing authorities and industry sources • Timing of transactions and price variability not considered
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	<ul style="list-style-type: none"> • Forecasts Queensland prices received by producers for current financial year and provides comparison with estimates for previous years for the following industries: <ul style="list-style-type: none"> o Beans o Capsicum o Lettuce o Sweet corn o Tomatoes

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	<ul style="list-style-type: none"> • Provides Tasmanian value estimates for the following industries: <ul style="list-style-type: none"> ◦ Carrots ◦ Lettuce ◦ Broccoli ◦ Greenhouse vegetables ◦ Broad beans ◦ French beans ◦ Runner beans ◦ Cauliflowers ◦ Brussel sprouts ◦ Green peas ◦ Tomatoes ◦ Parsnips ◦ Swedes ◦ Pumpkin ◦ Zucchini ◦ Celery ◦ Sweet corn ◦ Cabbages
Cost of Production Data ABARE Whole of Farm Viability Assessment	Periodic	Survey	ABARE	Regional	<ul style="list-style-type: none"> • Survey conducted last year collected some cost of production data for: <ul style="list-style-type: none"> ◦ 6 vegetables ◦ 4 regions • This survey is being conducted again this year, and AUSVEG have applied for funding to continue the survey for a further three years
Capital Cost Data ABARE Whole of Farm Viability Assessment	Periodic	Survey	ABARE	Regional	<ul style="list-style-type: none"> • Survey conducted last year collected some cost of production data for: <ul style="list-style-type: none"> ◦ 6 vegetables ◦ 4 regions • This survey is being conducted again this year, and AUSVEG have applied for funding to continue the survey for a further three years

Table 2.23: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data					
Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> • Covers imports and exports of: <ul style="list-style-type: none"> ◦ Cauliflowers ◦ Broccoli ◦ Brussels Sprouts ◦ Chinese Cabbage ◦ Lettuce ◦ Chicory ◦ Carrots and turnips ◦ Peas (fresh, frozen or dried) ◦ Beans (fresh, frozen or dried) ◦ Other legumes ◦ Artichokes ◦ Aubergines ◦ Celery other than celeriac ◦ Truffles ◦ Capsicums ◦ Frozen spinach ◦ Preserved olives ◦ Preserved cucumbers and gherkins ◦ Sweet potatoes • Data includes: <ul style="list-style-type: none"> ◦ Destination ◦ Country/State of origin ◦ Timing ◦ Volume ◦ Value
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> • Provides data on product characteristics, sales volume and selling price • Can be obtained by product, brand, location, retail chain or category
Market Price Data					
Ausmarket Fruit & Vegetable Market Price Data	Daily	Collected from market	Ausmarket Consultants	Capital City	<ul style="list-style-type: none"> • Indicative wholesale price ranges by quality, quantity and variety • Data collected from major markets in Sydney, Melbourne, Brisbane, Adelaide and Perth • Data available for all fruit and vegetable commodities sold through wholesale channels in Australia

Table 2.24: Additional Information

<p>Production / Price Signals:</p> <ul style="list-style-type: none">• AUSVEG publish commodity reports and import / export information that provide limited information to assist production decisions. <p>Market Structure:</p> <ul style="list-style-type: none">• Market structure varies by product. A typical breakdown of market structure is estimated to be:<ul style="list-style-type: none">◦ Wholesale – 40%;◦ Direct to retail – 40%;◦ Export – 6%;◦ Farmers markets / local markets – 10%; and◦ Processors – 4%. <p>Other Information:</p> <ul style="list-style-type: none">• A large proportion of total vegetable production is currently being collected under 'other' categories in the Agricultural Census and Survey.• AUSVEG are discussing having the Census and Survey expanded even further to include production by technique. There is an increasing shift towards greenhouse production which is less land intensive than field production.• AUSVEG believe that data from seed companies could be used as a proxy for future production.
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3. Nurseries

3.1 Nurseries

3.1.1 Nurseries

Industry Association: Nursery & Garden Industry Australia (NGIA)
Number of Growers: Not identified, although the NGIA have a list
Register of Growers: Yes
Members: Have approximately 1,300 members, with approximately 1/3 of these being growers

Table 3.1: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per plant container sold in Australia Potted plants produced for State Government are exempt from the levy
RETAILworks Market Monitor	Biannual	Consultation with industry	RETAILworks	Not identified	<ul style="list-style-type: none"> Includes volume at first point of sale data Data collected from all sectors of the industry, including: <ul style="list-style-type: none"> Growers Wholesalers Retailers Garden maintenance Landscapers
Price Data ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
RETAILworks Market Monitor	Biannual	Consultation with industry	RETAILworks	Not identified	<ul style="list-style-type: none"> Includes first point of sale data, which captures price Data collected from all sectors of the industry, including: <ul style="list-style-type: none"> Growers Wholesalers Retailers Garden maintenance Landscapers
Cost of Production Data					
Capital Cost Data					

Table 3.2: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data					
Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> Covers imports and exports of the following nursery products: <ul style="list-style-type: none"> Bulbs, tubers, tuberous roots, corms, crowns and rhizomes, dormant, in growth or in flower; chicory plants and roots Other live plants (including their roots), cuttings and slips Cut flowers and flower buds of a kind suitable for bouquets or for ornamental purposes, fresh, dried, dyed, bleached, impregnated or otherwise prepared Foliage, branches and other parts of plants without flowers or flower buds, and grasses, mosses and lichens of a kind suitable for bouquets or for ornamental purposes, fresh, dried, dyed, bleached, impregnated or otherwise prepared Data includes: <ul style="list-style-type: none"> Destination Country/State of origin Timing Volume Value
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Synovate AZTEC Scan Data	Ongoing	Retail bar code scan	Synovate AZTEC	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Market Data RETAILworks Market Monitor	Biannual	Consultation with industry	RETAILworks	Not identified	<ul style="list-style-type: none"> • Includes retail and wholesale sales data (price and volume) • Data collected from all sectors of the industry, including: <ul style="list-style-type: none"> ◦ Growers ◦ Wholesalers ◦ Retailers ◦ Garden maintenance ◦ Landscapers

Table 3.3: Additional Information

- Production / Price Signals:**
- NGIA have undertaken consumer research in the past, with the results disseminated to industry.
 - The RETAILworks Market Monitor provides information to industry regarding:
 - The value of the industry;
 - Distribution / supply chain; and
 - Market drivers, such as:
 - Design & décor trends;
 - Housing;
 - Water restrictions;
 - Garden media;
 - Weekend weather;
 - Gardening skills; and
 - Petrol prices.

Market Structure:

- Plants are primarily sold direct to market.
- Supply Chain:**
- The nursery industry has a very complex supply chain.
 - Analysis of the supply chain has been conducted in the past by RETAILworks (2003 the latest research), covering the following areas:
 - Channels products are sold through;
 - Breakdown of sales by supply chain level; and
 - Number of operators at each level of the supply chain.
 - There is some crossover between the grower and retail levels of the supply chain – there are a number of growers that sell direct to market (act as retailers) while there are some retail chains that also grow their own plants.

Other Information:

- Price data is difficult to collect in the nursery industry as they cover over 10,000 different plant varieties.
- NGIA are considering developing a price indicator akin to the CPI, providing an average price for a basket of plant varieties.

3.1.2 Turf

Industry Association: Turf Producers Australia
Number of Growers: Not identified
Register of Growers: Not identified
Members: Not identified

Table 3.4: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Levy	Quarterly & Annual	Collected at first point of sale	DAFF (Levies & Revenue Service)	Not identified	<ul style="list-style-type: none"> Levy is payable per square metre of turf produced in Australia and sold (including export) by the producer
RETAILworks Market Monitor	Biannual	Consultation with industry	RETAILworks	Not identified	<ul style="list-style-type: none"> Data collected from all sectors of the industry, including: <ul style="list-style-type: none"> Growers Wholesalers Retailers Garden maintenance Landscapers
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	<ul style="list-style-type: none"> Forecasts Queensland turf production for current financial year and provides comparison with estimates for previous years
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered
RETAILworks Market Monitor	Biannual	Consultation with industry	RETAILworks	Not identified	<ul style="list-style-type: none"> Includes first point of sale data, which captures price Data collected from all sectors of the industry, including: <ul style="list-style-type: none"> Growers Wholesalers Retailers Garden maintenance Landscapers

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Prospects for Queensland's Primary Industries	Quarterly	Currently available statistics and industry consultation	QDPI&F	State (Qld)	<ul style="list-style-type: none"> Forecasts Queensland turf prices received by producers for current financial year and provides comparison with estimates for previous years
Cost of Production Data					
N/a					
Capital Cost Data					
N/a					

Table 3.5: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Export Data					
Customs Export/Import Data	Ongoing	Customs protocol	Customs	State	<ul style="list-style-type: none"> Covers apple and pear imports and exports Data includes: <ul style="list-style-type: none"> Destination Country/State of origin Timing Volume Value
Retail Data					
AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category
Market Data					
RETAILworks Market Monitor	Biannual	Consultation with industry	RETAILworks	Not identified	<ul style="list-style-type: none"> Includes retail and wholesale sales data (price and volume) Data collected from all sectors of the industry, including: <ul style="list-style-type: none"> Growers Wholesalers Retailers Garden maintenance Landscapers



Table 3.6: Additional Information

<p>Production / Price Signals:</p> <ul style="list-style-type: none">• Not identified. <p>Market Structure:</p> <ul style="list-style-type: none">• Not identified. <p>Other Information:</p> <ul style="list-style-type: none">• N/a
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4. Other Crops

4.1 Other Crops n.e.i.

4.1.1.1 Pyrethrum

Industry Association:

Tasmanian Farmers & Graziers Association (TFGA)

Number of Growers:

Not identified

Register of Growers:

Have a register of all levy paying growers, which is estimated to account for approximately 80% of all pyrethrum growers

Members:

Not identified

Table 4.1: Farm Gate Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
Production Data					
Agricultural Census	Every 5 years	Census (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered
Agricultural Survey	Annual	Survey (Mail-out)	ABS	Regional	<ul style="list-style-type: none"> Covers a sample of all known agricultural producers with an EVAO of greater than \$5,000 Seasonality not considered Sample is not representative of individual industries
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	<ul style="list-style-type: none"> Provides Tasmanian pyrethrum production estimates
Price Data					
ABS Price Collection	Annual	Collected from market	ABS	State	<ul style="list-style-type: none"> ABS collects price information to estimate GVP Price data is for 'wholesale price realised in the marketplace' Prices collected from a variety of sources, such as marketing authorities and industry sources Timing of transactions and price variability not considered
Tasmanian Department of Primary Industries and Water Industry Profiles	Annual	Currently available statistics and industry consultation	TDPI&W	State (Tas)	<ul style="list-style-type: none"> Provides Tasmanian pyrethrum value estimates
Cost of Production Data					
N/a					
Capital Cost Data					
N/a					

Table 4.2: Other Identified Data

Name/Source	Frequency	Method of Collection	Collected By	Regionality	Comments
<u>Export Data</u> N/a					
<u>Retail Data</u> AC Nielsen ScanTrack	Ongoing	Retail bar code scan	AC Nielsen	Locality	<ul style="list-style-type: none"> Provides data on product characteristics, sales volume and selling price Can be obtained by product, brand, location, retail chain or category

Table 4.3: Additional Information

<p><u>Production / Price Signals:</u></p> <ul style="list-style-type: none"> N/a <p><u>Market Structure:</u></p> <p><i>Producers:</i></p> <ul style="list-style-type: none"> There are two major producers of pyrethrum in Australia, both located in Tasmania – Botanical Resources Australia (BRA) and Australian Pyrethrum Farms (APF). <p><i>Markets:</i></p> <ul style="list-style-type: none"> Virtually all the product produced by BRA is exported, with most going to the USA, while around 15% is split between Germany, Holland, Spain, Italy, Hong Kong, Singapore, Korea, Japan, India and New Zealand. Tasmania supplies around 30% of the world pyrethrum market, with east African countries such as Kenya supplying the rest. In 1996, Tasmania was supplying 10–15% of the world market. <p><u>Other Information:</u></p> <ul style="list-style-type: none"> N/a
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