Mornington Peninsula Shire
Agricultural Audit

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EXECUTIVE SUMMARY

Agricultural production across the Mornington Peninsula Shire is rich in diversity and scale of production which is reflective of the nature of the regional characteristics that enable this to occur. The regional area for agricultural production is approximately 23900 ha or 239km² which is about 33% of the total land mass (720km²).

The Port Phillip and Westernport region, which is inclusive of the Mornington Peninsula Shire, is the second most valuable agricultural region in the state, producing at least 15% of the total wealth generated from Victorian agriculture, from less than 4% of the state’s farmland (OSISDC 2010). Mornington Peninsula makes a significant contribution to this annual production figure with current estimated values of gross agricultural production in $450m (See Table 10).

<table>
<thead>
<tr>
<th>Commodity – MP Shire</th>
<th>Value of agricultural commodities produced* ($m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Vegetables</td>
<td>170</td>
</tr>
<tr>
<td>2. Poultry (Meat, eggs, pullets)</td>
<td>90</td>
</tr>
<tr>
<td>3. Wine</td>
<td>75</td>
</tr>
<tr>
<td>4. Beef Cattle / sheep</td>
<td>30</td>
</tr>
<tr>
<td>5. Berries</td>
<td>15</td>
</tr>
<tr>
<td>6. Fruit</td>
<td>10</td>
</tr>
<tr>
<td>7. Nurseries</td>
<td>&gt;20</td>
</tr>
<tr>
<td>8. Aquaculture</td>
<td>10</td>
</tr>
<tr>
<td>9. Other</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>450</strong></td>
</tr>
</tbody>
</table>

*The value placed on recorded production at the wholesale prices realised in the market place (2010 ABS)

It is an important peri-urban region in terms of the place of agriculture in the landscape. The region offers a diverse range of wine, food, fibre and fodder production in close proximity to a large metropolitan consumer base and sales distribution network.

The region has the capacity to obtain high yielding quantities of product and achieve very high quality parameters. However the amount of production is limited by factors such as land parcel size, soil type, water access, seasonality constraints (temp, rainfall, wind) and economic pressures on production margins. By starting to address productivity and profitability constraints in the short to medium term, there will be an opportunity to offset some expectations that all future land use potential can only be linked to sub division and / or hobby pursuits. In effect agriculture can have a meaningful role within the landscape that benefits the region and beyond in terms of contributions to food security.

**OPPORTUNITIES FOR ACTION**

- Bunyip Food Belt – targeting new production zones
- Mornington Peninsula Branded Produce
- Supporting value added processing in the Green Wedge Zone
- Agri-tourism
- Extension and capacity building
- Aquaculture
- Fodder production (hay, silage)
- Research & Development Funding
CURRENT AGRICULTURAL PRODUCTION
IN THE MORNINGTON PENINSULA SHIRE

carrots, broccoli, celery, parsnips, leeks,
endive, wombok, cabbage, cauliflower,
rhubarb, silver beet, beetroot,
herbs, parsley, radish,
spring onions, spinach, salad mix, baby cos,

asian & bunched vegetables

beef cattle, fat lambs, alpaca’s,

chicken meat, pullets, eggs

apples, apple cider, apple juice

pears, plums, pomegranates

cherries, strawberries, raspberries, blueberries

avocados, artichokes

native flowers, nurseries, cut flowers

grapes – eg. pinot noir, pinot gris, chardonnay

organic vegetables, chemical free garlic

goats cheese & milk curd

truffles, tomatoes, saffron, honey
INTRODUCTION

PERI-URBAN AGRICULTURE

History of agriculture near Australian cities has generally involved intensive farming established to capitalise on the easy access to markets for perishable goods, as well as favourable soils, climate water supply. As the cities expand and land prices rise, the urban fringe farmer intensifies production on smaller lots or sells land for housing and re-establishes further out where land is cheaper. This cycle repeats itself as a city continues to expand (Outer Suburban Interface Services and Development Committee, OSISDC, 2010).

These are the peri-urban regions are where growth corridors, green wedges, rural residential living and working farms meet. According to the Department of Sustainability & Environment the peri-urban region extends approximately 150 kilometres around Melbourne with the green wedges a subset of this area. These areas are considered to be rural and semi-rural land adjacent to and influenced by an urban centre (OSISDC 2010).

The operation of a commercial farm in these regions is challenging for reasons that may differ from what may be experienced in a more traditional rural area zone. In this region, there are generally more tensions resulting from interactions between rural landholders and urban dwellers due to the close proximity of rural and urban living and the lack of understanding of the critical timeliness of farm management practices throughout the growing season.

The Port Phillip and Westernport natural resource management region (Figure 1) is the second most valuable agricultural region in the state, producing at least 15% of the total wealth generated from Victorian agriculture, from less than 4% of the state’s farmland. The region is densely populated and therefore presents some unique issues, such as the impacts that come with population growth, urban and agricultural development (NRM 2010).

![Figure 1. The Port Phillip and Westernport Natural Resource Management region](image-url)
Mornington Peninsula contributes significantly to these production figures and is an important peri-urban region in terms of the place of agriculture in the landscape. The region offers a diverse range of wine, food, fibre and fodder production in close proximity to a large metropolitan consumer base and sales distribution network.

Strategically, Mornington Peninsula is well positioned to draw in a substantial population of tourists to offset a significant level of reliance on out-of-region produce sales for some enterprises. There are numerous micro-agribusinesses scattered across the shire which specialise in seasonal, niche produce and local sale points to enable reasonable profit margins to be achieved. The climatic conditions are also conducive to maximising yield potential and meeting exceptional quality parameters for lucrative boutique markets.

A recent parliamentary committee into “Sustainable Development of Agribusiness in Outer Suburban Melbourne -OSISDC, 2010” has identified Mornington Peninsula as an important region to be included in any decision-making regarding preservation of agricultural soils and land management in Melbourne’s collective peri-urban regions.

Key reasons highlighted in the report include:

- **Future proofing** – keeping farmland near cities builds resilience to climate change;
- **Food distribution systems** – peri-urban regions will have an added advantage in terms of costs;
- **Food miles** – there is strong perceived consumer demand for locally-produced foods.
- **The need to retain food-producing farmland** – global population growth demands that food production be doubled within 40 years;
- **Water and waste** – peri-urban regions are ideally located to recycle urban water and waste to provide water and nutrients for nearby agriculture;
- **Economic development** – agriculture on Melbourne’s fringe is economically significant and supports direct and indirect local employment close to where people live;
- **“Liveability”** – 80% of rural land in the green wedges is privately owned and farmers maintain the green wedge landscape for benefit of the wider community and public access to “vistas”;
- **Food security** – local food production strengthens “food security” which is defined as the state in which all persons obtain nutritionally adequate, culturally acceptable, safe foods regularly through local non-emergency sources; and
- **Ecosystems services** – farmland provides biodiversity, water supply, contributes to catchment health, carbon storage (OSISDC 2010)

The inquiry announced 84 recommendations of which a number align with priorities for this region. Relevant recommendations will be referred to in the discussion section and highlighted where they link to support regional strategies.

**INTERFACE COUNCIL**

Mornington Peninsula Shire is defined as an Interface Council – one of eight municipalities surrounding metropolitan Melbourne. Other councils that make up this group are the municipalities of Cardinia, Hume, Melton, Nillumbik, Whittlesea, Wyndham and Yarra Ranges.

The Interface, as a group, is composed of no more than 30% urban area and no less than 70% rural area. The rural parts of the Interface Councils are home to the Green Wedges –significant tracts of highly valuable agricultural and environmental land. However, the Victorian Government’s classification of the “rural” lands within the interface municipalities as “urban” prohibits the regions from qualifying for numerous rural or regionally targeted government grants. (Interface Council 2007).
CLIMATE CHANGE

A recent report on the impact of climate change in the Western Port region examined the nature and extent of potential impacts of climate change to this region in terms of environmental, social and economic vulnerabilities of different localities and groups.

Key findings that are linked to agricultural production within the region indicate that:

- The Western Port region is significantly exposed to climate extremes and natural hazards such as storm surge and coastal inundation, floods, bushfires and extreme temperatures. These hazards are projected to increase in frequency and severity, although the maritime climate will have a moderating effect not afforded to most other districts of Victoria, increasing the agricultural production value of the Mornington Peninsula due to lower risks of crop failure due to extreme heat events.
- Average rainfall in the Western Port region is projected to decline by up to 8% in 2030 and 23% by 2070, with reductions potentially coming in all seasons but especially in winter and spring.
- Drought frequency and intensity are projected to increase (Kinrade & Preston 2008), although not to the extent expected in non-maritime regions.

A more detailed analysis of the actual local connections between the impact of climate change and agriculture will help the region quantify more specifically the direct implications of projected temperature and rainfall variances and industry vulnerabilities.

In particular, water access and seasonal rainfall variability on future productive capacity and enterprise risk management and temperature effects influencing the maritime cool climate status, so important for the success of quality production.
PROJECT BACKGROUND

In April 2009, the Mornington Peninsula Shire Council approved the Economic Sustainability Strategy (ESS). The Strategy provides a framework to facilitate sustainable economic development for the Mornington Peninsula Shire (MPS).

The ESS is aligned with the Shire’s Strategic Plan 2009 – 2013, Supporting a Sustainable Peninsula economy and in particular Goal 4: Supporting a Sustainable Peninsula Economy of which there are 4 outcomes:

4.1 Prosperous Rural Economy
4.2 Sustainable Tourism
4.3 Resilient Economy
4.4 Increased investment

The ESS identified 63 projects of economic significance and prioritised 19 for implementation. These projects are in areas that would have the most impact from the allocation of Economic Development Unit (EDU) resources and are complementary to the outcomes stated in the ESS and the Shire’s Strategic Plan.

Fourteen of the ESS projects specifically relate to agriculture, aquaculture, hydroponics and horticulture and link to:

Outcome 4.1 Prosperous rural economy

- 4.1.1 To foster and encourage agriculture and promote the Peninsula’s rural Sector;
- 4.1.2 To provide timely and reliable information to assist informed rural businesses decision making;
- 4.1.3 To maximise rural business opportunities through the advocacy for the removal of regulatory impediments (right to farm);
- 4.1.4 To develop and grow local business including agri-tourism and intensive agriculture;
- 4.1.5 To increase diversity of rural business enterprises through networking and industry development; and
- 4.1.6 To foster a capable and adaptive local workforce.

Before any further project development has been undertaken there was a need to gain a better understanding of the broader position and role of agriculture in the region. Establishing baseline data to update the shire’s understanding of diversity and scale of agricultural production systems in terms of yields, diversity, quality and annual economic contributions is critical.

The strategic agricultural profile for Mornington Peninsula region is ad hoc and fragmented, in terms of what is known about the rural production systems and products being generated within the various landscape topographies. Therefore, a current and accurate position of the agricultural landscape will ensure on-ground projects that engage with relevant stakeholders will be implemented in a targeted and timely delivery framework.
Aim

A Rural Business Officer was appointed to undertake an agricultural audit to enable the organisation to develop a better understanding of the scale and diversity of agricultural production system across the region.

The aim of the project was to gather data that would help better describe the region in terms of the location, type and size of rural industries that currently sit within the shire boundaries. In addition, it will also help identify opportunities for agribusiness to obtain greater support, in terms of knowledge and capacity building, networking, critiquing productive capacity, value adding and marketing.

Planning and development of future rural projects will benefit from the audit with the baseline data to be used for the following purposes:

- Benchmarking current industry production, economic and social trends;
- Designing monitoring and evaluation strategic plans;
- Development of strategies and engagement processes to meet stakeholder needs;
- Identifying current and future investment priorities; and
- Facilitating the strategic development of projects targeting triple bottom line goals aimed at enhancing profitable, environmental and social resilience in rural landscapes.

Project Methodology

A comprehensive audit has been undertaken to determine the following elements of agriculture within the region:

- Identification of the range of agricultural production systems within the shire and update knowledge on the value and contribution of agriculture to the regional and state economy;
- Determine the quantity and value of production on a per industry basis (tonnage, total area grown, quality, $ value);
- Identify key networks that support Research & Development, capacity building, marketing and strategic funding opportunities;
- Summarise key markets for produce – local, regional, intra / interstate and export points of sale; and
- Highlight opportunities for raising the profile of agriculture and value added food and its productive value within the MP shire.

This audit draws on a combination of existing data sources to collect information regarding agricultural production in the Mornington Peninsula Shire. New information has also been generated by analysis of survey data, semi-structured interviews and review of the Farm rate database for land parcel size and key agricultural practices.
DATA SOURCES

The sources of data that have been used for this audit include the following:

1. Australian Bureau of Statistics (ABS);
2. Australian Bureau of Agriculture and Resource Economics (ABARE);
3. Victorian Department of Primary Industry web site;
4. Department of Sustainability and Environment web site;
5. Rural Research and Development Corporations;
6. State and local government reports;
7. Semi-structured interviews conducted with local agribusinesses;
8. MP Shire Farm Land rate eligibility database (Appendix A)
9. Survey sent to 1289 eligible “Farm Land rate” landholders (Appendix B);
10. Survey sent to 450 local food business end users of produce (See Appendix C).
REGIONAL PROFILE

LOCATION

The Mornington Peninsula Shire (Figure 2) is located on the south eastern tip of Port Phillip Bay. It has a total area of 720km² of which 30% is classified in the urban growth boundary and the remaining 70% designated Green Wedge Zone.

Much of the topography is flat in the north where it connects to the mainland, however moving south-west, it soon becomes hilly, culminating in the central hilly landscapes of Boneo, Main Ridge, Red Hill, Tuerong and Moorooduc. The highest point, Arthurs Seat, located close to the shoreline, stands at 305m (1,001 ft) above sea level. The peninsula hosts around 190 km of coastline which accounts for about 10% of Victoria’s overall ocean border. The region is the traditional home of the Bunurong people and has a rich history of human settlement dating back 40,000 years.

Figure 2: The Mornington Peninsula Shire – Township boundaries
HISTORY OF AGRICULTURAL PRODUCTION ON THE MORNINGTON PENINSULA

Historically, the agricultural sector has been a key element of the local economy and landscape since the late 1800s. The region was initially opened up for livestock (cattle and sheep) and cultivation (wheat), the first major rural industries to take advantage of the peninsula’s climate and soils to develop production systems and provide food for the developing city of Melbourne.

In the early twentieth century orchards and nurseries joined sheep and cattle as major land uses in the shire and by the mid 1900s horse studs and poultry farms had developed a large presence. The region had been renowned for its fertile soils, reliable rainfall, quality produce and locality near a growing metropolitan city. The 1990s saw the region strongly associated with an increase in vineyard plantings and a significant effort to establish a wine making industry, which is recognised to an international standard in the current day. It must be noted that regional settlement history records the presence of some vineyards in as early as 1864 at Balcombe’s property (Butler 1994).

The urban encroachment into the traditional farming regions around Melbourne has influenced the modern day shape and size of landholder parcels and has been a contributing factor to the redistribution and removal of certain agricultural production capacity within the region. As demand for lifestyle farming and urban living in the region increased so did the redistribution of land use planning and management to meet the demands for housing while maintaining a large proportion of the landscape for rural pursuits.

Current day, the landscape is dotted with vineyards, olives, beef cattle, fodder, fruit trees, vegetables, rolling pastures, a significant equine industry and a wealth of small niche produce enterprises gathering an ever increasing presence in the region. Behind these visual appearances are numerous enterprises generating millions of dollars in agricultural production often undervalued in terms of its known dollar value and contribution to the Victorian agricultural economy. While a number of sectors generate more output, the agricultural sector continues to have a key role culturally by its associated lifestyle and activities. Environmentally it also contributes to providing a scenic landscape that is valued by the influx of visitors throughout the year who are captivated by the vista that presents itself once people enter the Mornington Peninsula Shire.

Mornington Peninsula Shire is an important example of peri-urban agriculture with the potential for increased production by many micro-businesses as indicated in the survey and interviews (see results and discussion).
**WATER**

Responsibility for urban and rural water supplies across the Mornington Peninsula Shire are maintained and regulated by two main authorities:

**South East Water** - a provider of water, recycled water sewerage, trade waste and water saving services for residents and businesses; and  

**Southern Rural Water** - a water corporation owned by the State Government, responsible for harvesting and supplying water from our catchments including water trading licences to use and take water from rivers, streams, drainage systems and groundwater aquifers, metering, bore construction and decommissioning licences, construction and operating licences for farm dams and monitoring and managing water levels in streams and aquifers.

**Commercial agricultural water supply**
Water for use in commercial scale agricultural production across the region is sourced from a combination of recycled water schemes which deliver between Class A and C quality for crop and pasture production, on-farm dam storage, and licensed bore water accessions, supplemented by natural rain events throughout the year.

In particular, intensive horticultural production relies heavily on a combination of irrigation and rain fed water supplies to ensure adequate amounts are available throughout the growing season.

On-farm dam storage provides the majority of water available for intensive agricultural production in the northern section of the shire. In the southern peninsula the Boneo water treatment plant has the current capacity to deliver 1.6 gigalitres of Class A recycled water / year to growers in the designated Boneo production zone. This capacity is projected to double to 3.2 gigalitres once the Eastern Treatment Plant upgrades are completed in late 2012. Recycle water quality is also an ongoing issue with concerns about the definition of what standards Class A water must meet in terms of salt concentrations. Currently Boneo water salt concentrations are < 550 ppm EC which qualifies for “fit for purpose” usage.
There are some site specific water quality issues regarding high salt concentrations and some growers are actively seeking alternatives to “shandy” water supplies to dilute the impact of high salt concentrations on crop production.

Fresh water aquifers in the region can be accessed to provide water for stock and domestic consumption, however the Nepean Aquifer in the southern peninsula has been capped for commercial use. Another aquifer located in the central and northern sections of the Green Wedge Zone varies considerably in terms of water yield but it is accessed for use within the Shire around Hastings, Tyabb and Somerville for non agricultural purposes.

ENERGY

Electricity is the main energy source available for rural enterprises across the region. The Victorian Farmers Federation (VFF) through Origin energy offers an electricity rebate for current members. Benefits of this offer include:

- exclusive electricity rates;
- a fixed electricity rate until 31 December 2012; and
- available for both residential and business meter types (2010 VFF).

Intensive chicken farming enterprises are heavily reliant on stability of electricity supply especially in times of vulnerability e.g. high temperature conditions for extended periods. Electricity costs are constantly rising and with a 55,000 bird farm currently averaging $800 / monthly bill. There is also a substantial amount of Liquid Petroleum Gas (LPG) used for heating broiler sheds to maintain a constant growing environment of around 34°C for young chicken until they reach full feather and increase in size.

Access to natural gas is limited as the pipelines do not extend far inland or up into the hinterland, with availability limited to bottled gas which is mainly used in domestic households.
Employment

The 2006 Census shows there were 923 people employed in the Shire’s agriculture, forestry and fishing industries, making up 2.4 percent of the municipality’s local workforce (Source: ABS, 2006 Census Quick Stats: Mornington Peninsula).

The 2007 Australian Bureau of Statistics count of businesses recorded 792 businesses operating in Mornington Peninsula under the Agriculture, Forestry and Fishing classification; around 75 percent of these businesses were non-employing, although 15 businesses employed between 50 and 99 people. Around half of all businesses had an annual turnover of under $75,000. (ESS 2009).
CLIMATE

The Mornington Peninsula is a temperate southern Australian climate with cool, wet winters and warm dry summers. It is well recognised and characterised by its cool maritime attributes which are highly prized growing conditions for a range of fresh produce including specific varieties of grapes, apples, strawberries, cherries, olives, avocados and vegetables. A mild climate, high and well-distributed rainfall, good soils and ready access to markets have combined to make the region an important farming area for a range of seasonally selected enterprises.

RAINFALL

The Mornington Peninsula rainfall distribution pattern provides reliability in terms of monthly average rainfall ranging from 40 – 70 mm over the year and provides additional water security to rain fed and irrigated agricultural production systems across the region (See Figure 3).

![Mean monthly total rainfall (mm)](image)

Figure 3: Mean monthly total rainfall (mm)

However, rainfall in the region has been consistently lower than average over the past decade with rainfall reliability falling from 900 mm to 650 mm across the year. It has also been noted that greater intensity summer storm patterns are increasing in their occurrence this decade than has previously been experienced.

Arthurs Seat can cause a rain shadow effect as the mountain rain storms can be dissipated especially when heading across from Port Phillip Bay. Generally, the South Westerly drizzly weather patterns of low pressure systems sitting in Bass Strait give the region good reliable rainfall and bring gentle soaking rain with it. These rainfall events are ideal for infiltration into soils with a high water holding capacity. Water erosion is limited on the slopes due to the excellent groundcover that is maintained all year round, which minimises sediment flows into creek systems and dams.
**Temperature**

Temperature influences are critical to the ripening periods for produce and can have a substantial impact and critical growth periods including flowering and seed setting. The coastal influences on both sides of the peninsula provide a heat sink to buffer some extreme temperature impacts especially during summer.

In general, extreme temperature events tend to be limited in their ferocity especially with respect to frost risk, however extreme heat events such as experienced in Feb 2009 will cause irreparable damage if timing with flowering or ripening occur.

The maritime climate includes the influences of the two bays and the “heat sink” buffer the ocean water can provide to reduce the extreme temperature influences on production across the peninsula compared with other inland regions. Mean daily temperature maximums range from 12-25°C while minimum daily temperatures sit between 6-12°C. See Figure 4 for temperature distribution pattern.

![Average monthly daily temperature - Min. & Max (C)](image)

**Figure 4: Average monthly maximum and minimum daily temperature for Mornington Peninsula**

**Frost**

The majority of vegetable and salad crops can be grown all year round because of the low frost risk which makes the region a highly desirable location for crop production and supply to markets 12 months of the year. The effect of frost is limited in the region due to the maritime climatic influences and generally warm wind flows from across Port Phillip or Western Port bays. The Boneo district has been described as one of the best market garden regions to grow vegetables due to the low frost risk by local growers.
LANDSCAPE

The landscape across the region ranges from rich, volcanic slopes throughout the hinterland, sandy flats in the lower part of the region and the Moorooduc plains across the middle, and Bittern land up in the north of the region. The landscape has many key features or reference points for linking agricultural productivity and soil mapping units quite accurately to which current day agricultural systems are connected. Soils largely determine potential production on the Peninsula, except for some intensive production such as greenhouses and broiler sheds. The red volcanic soils commonly support horticulture and vineyards and are potentially viable economic units.

The landscape comprises many sloping hills which contain meso and micro-climates. These are often referred to in terms of a specific vineyard site or land production portion of a site that is unique. They are able to take advantage of production and quality niches where particular crops can access timely sunlight and protection from weather elements during critical growth stages which heavily influence quality, flavour, size and market access.

The region has many different landforms that represent an ancient landscape that comprises sandy limestone aquifers, granite outcrops, basalt plains and sedimentary deposition. This unique set of landforms provides such a diversity of options for production within such a small area.
SOILS

Soils across the peninsula vary in structure, texture, fertility and water holding capacity. There are 20 soil mapping units that comprise the majority of landform features with another 16 complexes that influence small areas of land management scattered throughout the region (Appendix D).

There are seven principal soil mapping units that provide the majority of fertile ground suitable for agricultural production (See Table 1 & Fig 5). The characteristics of these soil types link strongly to specific production systems and enable productive capacity and quality to be maximised. This is provided critical seasonal growth influences such as rainfall, temperature, wind, sunshine, evaporation and frost are able to be harnessed efficiently at key growing stages. (e.g. vegetative growth, flowering, ripening). The key soil mapping units linked to agricultural production in the shire are:

1. **Bittern (Bi)**
   The Bittern mapping unit is the predominate soil and associated land system across the Mornington Peninsula. These soils are duplex in nature and described as hard and mottled yellow with a very distinct break marked by a thin, acid cement/sand pan between the surface soil and the underlying friable, well-drained clay. This soil is mostly cleared and supports improved pastures, scattered mainly across the northern and eastern parts of the peninsula. The addition of organic matter and use of fertilisers and irrigation enables these soils to become highly productive and they can be continuously cultivated. Therefore, this mapping unit is prized for intensive horticultural production with a wide range of vegetables grown and two or three crop rotations achieved per year.

2. **Red Hill (Rh)**
   Red soils of volcanic origin are very deep, fertile friable and porous soils and often described as red ferrosols, which reflects the high iron oxide content. The typical surface soil of the red ferrosol is dark reddish brown light clay or clay loam with a strong fine crumb structure, grading at about 200mm, into a strong brown or dark reddish brown light or medium clay with some small ironstone concretions. The soils within this mapping unit are highly prized for vineyards, berry crops and orchards, particularly apples. Where slopes are favourable, vineyards are a preferred option as once the vines are well established on this soil the need for supplementary water is minimal.

3. **Rosebud (Ro)**
   The Rosebud surface soils are typically dark grey sands becoming lighter in colour at around 300mm. They are typically acidic with a pH around 5.5 to 6.0 and increasing with depth. Most of the developed parts of this landscape are under grazing, however there are some vegetable production unit on the lower slopes near Boneo road. Like the soils on the Boneo mapping unit, these soils are poor chemically and as they are sandy retain little water but are able to be turned into highly productive soils with the addition of irrigation, fertilizers and organic matter.
4. Boneo (Bo)
The Boneo surface soils are loamy sands and these continue to a considerable depth. Variations in surface colour are mainly due to organic matter differences. The pH of the surface soils is generally around 7, with the pH increasing with depth. These soils are poor chemically and have a low water holding capacity due to their sandy texture, however with the addition of fertiliser and irrigation they are capable of producing high yielding vegetables crops all year round.

5. Langwarrin (Lw)
The surface soils are generally grey or light grey loam to silty loam about 150 mm deep. This mapping unit tends to be centrally located east of Dromana and extends up towards Moorooduc. Where the rainfall is lower and the soils are exposed to more salt laden rain, the subsoils may exhibit sodic characteristics such as low porosity and hard setting layers which limit fibrous root penetration. Although these soils are well drained externally, their internal drainage is very slow because of the impermeable clay subsoil. Until fairly recently the soils were used for grazing, but increasingly they are being used for viticulture, if the slopes are favourable.

6. Cranbourne (Cr)
The Cranbourne mapping unit occurs in the north-eastern part of the Mornington Peninsula Shire. The surface soils are typically quite acidic with a pH around 4.5 to 5.0 and the subsoils around pH 4.5 to 5.5. The sandy texture of the soil prohibits it from retaining water, however with irrigation, fertilizers and additional organic matter they have the capacity to be highly productive and can be cultivated most of the year with two or more crops able to be grown annually. Most of the land is cleared and is used for intensive horticultural production systems.

7. The Cups (Cp)
The unique landscape west of Trueman’s road is known locally as “The Cups”. It comprises strong, undulating dune fields with short steep slopes and enclosed depression. The land has little value for vegetable production, due to its topography, but is extensive grazing capacity on some of the larger parcels in the area. (Sargeant 2003).

<table>
<thead>
<tr>
<th>Soil / land systems</th>
<th>% area linked to agricultural production (in MP Shire)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bittern</td>
<td>27%</td>
</tr>
<tr>
<td>The Cups</td>
<td>8%</td>
</tr>
<tr>
<td>Red Hill</td>
<td>8%</td>
</tr>
<tr>
<td>Langwarrin</td>
<td>11%</td>
</tr>
<tr>
<td>Rosebud</td>
<td>5%</td>
</tr>
<tr>
<td>Flinders</td>
<td>5%</td>
</tr>
<tr>
<td>Merricks</td>
<td>7%</td>
</tr>
<tr>
<td>Boneo</td>
<td>2%</td>
</tr>
<tr>
<td>Cranbourne</td>
<td>2%</td>
</tr>
<tr>
<td>Non-agricultural land</td>
<td>2%</td>
</tr>
</tbody>
</table>

Figure 5 – Key agricultural production soils across the Mornington Peninsula Shire
Table 1. Soil mapping units and key agricultural production systems

<table>
<thead>
<tr>
<th>Soil mapping unit</th>
<th>Land use pattern</th>
<th>Description</th>
<th>Area (ha)</th>
<th>% area of Shire</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bittern</td>
<td>Intensive horticulture</td>
<td>Vegetables</td>
<td>19,400</td>
<td>27</td>
<td>Sodic clay subsoil present which can impede root development and water penetration</td>
</tr>
<tr>
<td></td>
<td>Grazing / Equine</td>
<td>Beef, Equine, Alpacas</td>
<td></td>
<td></td>
<td>Close to Port Phillip Bay, which influences salt content allowing sodium accumulation in the sub soil</td>
</tr>
<tr>
<td></td>
<td>Hay</td>
<td>Fodder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Broiler sheds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Apples / Olives</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Viticulture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cut flowers / nurseries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red Hill</td>
<td>Tree crops, livestock grazing</td>
<td>Olives, apples, pears, berries</td>
<td>5,850</td>
<td>8.0</td>
<td>Deep, friable, porous soils highly prized for berry crops, orchards and vineyards</td>
</tr>
<tr>
<td></td>
<td>Viticulture</td>
<td>Beef, alpacas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Avocados, Viticulture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Langwarrin</td>
<td>Grazing, pasture</td>
<td>Beef, equine</td>
<td>9,265</td>
<td>7.9</td>
<td>Impermeable clay subsoil causes slow internal drainage and water logging is prevalent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Viticulture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Broiler</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rosebud</td>
<td>Intensive Horticulture</td>
<td>Vegetables</td>
<td>5,183</td>
<td>7.2</td>
<td>Raised elevation in the landscape – irrigation may influence groundwater quality and depth lower in the catchment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Strawberries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Broiler</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flinders</td>
<td>Grazing / hay</td>
<td>Beef, Equine</td>
<td>8,250</td>
<td>5.3</td>
<td>Mainly suited to improved pastures</td>
</tr>
<tr>
<td>Merricks</td>
<td>Poorly drained</td>
<td>General grazing</td>
<td>3,749</td>
<td>5.2</td>
<td>Poorly drained during wet periods</td>
</tr>
<tr>
<td>Boneo</td>
<td>Intensive horticulture</td>
<td>Veg / cut flowers</td>
<td>1,383</td>
<td>2</td>
<td>Low fertility and water holding capacity but can be cultivated over the whole year</td>
</tr>
<tr>
<td>Cranbourne</td>
<td>Intensive horticulture</td>
<td>Vegetables</td>
<td>1,310</td>
<td>1.8</td>
<td>Surface and subsoil pH 4.5-5.5 – strongly acidic</td>
</tr>
<tr>
<td>The Cups</td>
<td>Limited grazing</td>
<td>Beef</td>
<td>8,011</td>
<td>11^a (estimate 5% in rural zone)</td>
<td>Topography limits land use to grazing</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>75 %</td>
<td></td>
</tr>
</tbody>
</table>
Other soil units
There are of other soil / land systems scattered across the region that also provide some level of productive capacity – mainly perennial pastures for grazing and fragile, sandy systems that support coastal vegetation and urban development. These are the Dromana, Arthurs Seat, Hastings, Pearcedale, Toomuc and Bittern sandy loams and Flinders clay mapping units or combinations of complexes which can be subdominant or co-dominant in their inherent nature.

Soil properties – farm management considerations
There are a number of soil characteristics that influence the degree to which agricultural productive capacity can be maximised or restricted within a particular land system. These include:

- pH
- Organic carbon and nutrient status
- Structure and texture,
- Sub soil constraints, compaction and hardpans
- Drainage / infiltration capacity
- Sodicity and Salinity
RESULTS

SURVEY

Surveys were sent to 1289 owners of Shire Farm Land rate parcels. (This figure takes into account a number of owners of multiple parcels). In total, 1126 Farm Land rate shire residents were given the opportunity to respond to the survey and provide input into the audit to update knowledge. The survey asked questions to help:

- Determine the quantity and value of production on a per industry basis (tonnage, total area grown, quality, $ value);
- Identify key networks that support research and development, capacity building, marketing and strategic funding opportunities;
- Summarise key markets for produce – local, regional, intra / interstate and export points of sale; and
- Highlight opportunities for raising the profile of agriculture and value added food and its productive value within the Mornington Peninsula Shire.

The survey was designed to collect specific baseline information to help build a more robust picture of scale and diversity of agricultural production. Both quantitative and qualitative methods were used to focus on specific data collection about key components of the enterprise and enable people to provide feedback on some more strategic elements concerning the rural landscape and future opportunities. Refer to Appendix B for the agricultural survey.

The Shire Farm Land rate database was also used to identify the land ownership demographics for the region, see Table 2. There was a high rate (33%) of owners having an external shire mailing address. This is an interesting land ownership demographic from an agricultural perspective because traditionally rural communities relying heavily on agricultural industry for income would have a much higher rate of local residency.

Table 2. Summary of survey demographics for land ownership

<table>
<thead>
<tr>
<th>Survey</th>
<th>Total number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of mail outs</td>
<td>1289</td>
<td>100</td>
</tr>
<tr>
<td>No. of multiple land owners in mail out</td>
<td>163</td>
<td>12.6</td>
</tr>
<tr>
<td>No. of total owners in mail out</td>
<td>1126</td>
<td></td>
</tr>
<tr>
<td>Sub groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of Government parcels</td>
<td>5</td>
<td>0.03</td>
</tr>
<tr>
<td>Local residential address</td>
<td>745</td>
<td>66.54</td>
</tr>
<tr>
<td>External residential address</td>
<td>376</td>
<td>33.43</td>
</tr>
</tbody>
</table>
**Farm Land Rate Database Statistics**

The shire farm land rate database and GIS aerial mapping photos were used to quantify accurate data regarding total farm land area, median land parcel size and general land attribution to an agriculture production system.

Table 3 & 4 provide a snapshot of the breakdown of agricultural production land ownership statistics in terms of average and median land parcel size, number of holdings in defined area (ha) ranges and land attribution to specific agricultural production where possible to describe.

**Table 3. Summary of Shire Farm Land (FL) rate parcels statistics**

<table>
<thead>
<tr>
<th>Parcel data</th>
<th>Parcel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total no. of eligible FL rate parcels</td>
<td>1289</td>
</tr>
<tr>
<td>Total no. of landholders of FL rate parcels</td>
<td>1126</td>
</tr>
<tr>
<td>Average Farm land rate parcel size (ha)</td>
<td>18 (ha)</td>
</tr>
<tr>
<td>Median Farm Land rate parcel size (ha)</td>
<td>15.5 (ha)</td>
</tr>
<tr>
<td>Total FL rate area (ha) in the Shire</td>
<td>23900 ha</td>
</tr>
</tbody>
</table>

**Table 4. Farm Land rate database land ownership and agricultural production statistics**

<table>
<thead>
<tr>
<th>Agriculture production system, No. parcel allotments</th>
<th>Comment on identification method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grazing (includes sheep, beef, alpaca, equine) 524</td>
<td>Unable to differentiate enterprise type by aerial photograph but pasture paddocks are visible which indicate some type of grazing enterprise is being undertaken</td>
</tr>
<tr>
<td>Beef 234</td>
<td>Combination of survey, interviews, shire reports and aerial photographs</td>
</tr>
<tr>
<td>Vegetables 64</td>
<td>Aerial photographs and survey data</td>
</tr>
<tr>
<td>Vines 178</td>
<td>Aerial photograph / visual identification of vines + survey data</td>
</tr>
<tr>
<td>Alpacas 11</td>
<td>Survey and MP Alpaca Breeders information used to identify specific properties</td>
</tr>
<tr>
<td>Nurseries 14</td>
<td>Aerial photographs</td>
</tr>
<tr>
<td>Equine 75</td>
<td>Aerial photographs indicating small paddocks and shelters</td>
</tr>
<tr>
<td>Olives 15</td>
<td>Survey data and association membership data</td>
</tr>
<tr>
<td>Poultry 72</td>
<td>Shire database and aerial photographs</td>
</tr>
<tr>
<td>Horticulure – (hydroponics, glass houses, sheds, unidentified crops) 17</td>
<td>Unable to determine actual intensive production but broadly determined as horticulture</td>
</tr>
<tr>
<td>Orchard (Pomme fruit, olives, cherries, plantations) 33</td>
<td>Aerial photographs indicate the presence of a tree orchard of some type</td>
</tr>
<tr>
<td>Apples – core business 20</td>
<td>Survey and interviews to determine growers</td>
</tr>
<tr>
<td>Hay – included in some grazing / beef parcels 63</td>
<td>Hay production determined from aerial photographs – may be linked to a grazing</td>
</tr>
<tr>
<td>Cherries 3</td>
<td>Survey results and shire database</td>
</tr>
<tr>
<td>Christmas trees 3</td>
<td>Survey results</td>
</tr>
<tr>
<td>Avocados 8</td>
<td>Interviews and survey</td>
</tr>
<tr>
<td>Crown / Shire land 5</td>
<td>Farm Land rate database</td>
</tr>
<tr>
<td>Total 1289</td>
<td></td>
</tr>
</tbody>
</table>

Mornington Peninsula Shire - Agricultural Audit 24
**Land parcel size distribution**

A breakdown of the number of land holders for each defined parcel size area that is eligible for Shire Farm Land rate has also been determined. This demonstrates that there is not necessarily a direct relationship between land area size and the ability to run an economically useful enterprise as many small properties are able to satisfy the criteria to receive the Shire Farm land rate.

Figure 6 provides a breakdown of the number of land parcel size by defined area parameters.

![Graph showing land parcel size distribution](image)

**Figure 6. No. of Farm Land rate parcels x size (ha)**
**SURVEY RESPONSES**

There were 240 respondents to the agricultural survey which indicates a 21.3% return rate. This response rate is adequate to be confident about the accuracy of the following information that has been collected from specific questions:

- Quality parameters / benchmarks for cool climate produce;
- Sale points – cellar door, farm gate, U pick, farmers market, Melbourne market, regional saleyard, supermarkets;
- Market / distribution demographics (Local, metro, regional, intra / interstate, export);
- Industry association membership; and
- Understanding communication and information exchange pathways.

The response to each survey question is summarised below.

**Q 1). What agricultural production is currently undertaken on your property?**

Responses to this question are summarised by production type in Table 5.

<table>
<thead>
<tr>
<th>Production type</th>
<th>Number of survey respondents</th>
<th>% overall response for 1126 owners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td>109</td>
<td>9.6</td>
</tr>
<tr>
<td>Sheep</td>
<td>8</td>
<td>0.71</td>
</tr>
<tr>
<td>Vineyards / wineries</td>
<td>49</td>
<td>4.3</td>
</tr>
<tr>
<td>Alpaca</td>
<td>3</td>
<td>0.26</td>
</tr>
<tr>
<td>Horticulture (vegetables, fruit, berries, avocados)</td>
<td>22</td>
<td>1.9</td>
</tr>
<tr>
<td>Poultry</td>
<td>15</td>
<td>1.3</td>
</tr>
<tr>
<td>Flowers / nurseries</td>
<td>8</td>
<td>0.71</td>
</tr>
<tr>
<td>Olives</td>
<td>14</td>
<td>1.2</td>
</tr>
<tr>
<td>Hay</td>
<td>11</td>
<td>0.97</td>
</tr>
<tr>
<td>Other – equine, trees</td>
<td>4</td>
<td>0.35</td>
</tr>
<tr>
<td><strong>Total respondents</strong></td>
<td><strong>240</strong></td>
<td><strong>21.3</strong></td>
</tr>
</tbody>
</table>
Q 2). Which method best describes how and where your produce gets sold?
Survey responses indicate there are a range of distribution and sale points accessed by agri-business to sell produce. Table 6 provides a summary of data collected in the survey that is indicative of where regional produce is currently being distributed for wholesale and retail purchase.

Table 6. Distribution and sale points for Mornington Peninsula agricultural produce

<table>
<thead>
<tr>
<th>Product</th>
<th>Quality</th>
<th>Key market / sale points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables</td>
<td>Broccoli, cabbage, cauliflower</td>
<td>Wholesale markets</td>
</tr>
<tr>
<td></td>
<td>Lettuce, celery, salad mix / herbs</td>
<td>Local distribution networks</td>
</tr>
<tr>
<td></td>
<td>Carrots, Bunching vegetables (asian, dutch carrots)</td>
<td>Farmers markets, Providores</td>
</tr>
<tr>
<td></td>
<td>Shallots / leeks / parsnips / herbs</td>
<td>Supermarkets, Green grocers</td>
</tr>
<tr>
<td></td>
<td>Salad mix</td>
<td>Food processors, Food services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Interstate markets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Export</td>
</tr>
<tr>
<td>Wine grapes</td>
<td>Pinot Noir - 47%</td>
<td>Contracts to local wineries</td>
</tr>
<tr>
<td></td>
<td>Chardonnay – 26%</td>
<td>Cellar doors – 30% total sales</td>
</tr>
<tr>
<td></td>
<td>Pinot Gris – 9%</td>
<td>Local restaurants / cafes</td>
</tr>
<tr>
<td></td>
<td>Shiraz – 6%</td>
<td>Wholesale sales</td>
</tr>
<tr>
<td></td>
<td>Cab Sauvignon – 3%</td>
<td>Mail order</td>
</tr>
<tr>
<td></td>
<td>Merlot – 2%</td>
<td>Local bottle shops</td>
</tr>
<tr>
<td></td>
<td>Other 9%</td>
<td></td>
</tr>
<tr>
<td>Beef cattle</td>
<td>Breeders / Vealers</td>
<td>Pakenham sale yards</td>
</tr>
<tr>
<td></td>
<td>Store purchase and steer fattening</td>
<td>Victorian livestock exchange</td>
</tr>
<tr>
<td>Broilers</td>
<td>Chicken meat</td>
<td>Feed lots</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Direct “over the hooks” to abattoirs</td>
</tr>
<tr>
<td>Apples</td>
<td>Fresh – 1st grade</td>
<td>Wholesale markets</td>
</tr>
<tr>
<td></td>
<td>Apple cider</td>
<td>Farm gate</td>
</tr>
<tr>
<td></td>
<td>Apple cider vinegar</td>
<td>Supermarkets</td>
</tr>
<tr>
<td></td>
<td>Apple juice</td>
<td>Value adding processing – juice</td>
</tr>
<tr>
<td>Cherries</td>
<td>Fresh pick varieties</td>
<td>U Pick – tourists</td>
</tr>
<tr>
<td></td>
<td>Sour “Morello”</td>
<td>Farm gate</td>
</tr>
<tr>
<td>Avocados</td>
<td>Fresh</td>
<td>Melbourne wholesale markets</td>
</tr>
<tr>
<td>Olives</td>
<td>Oil, Table</td>
<td>Local – cafes, restaurants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>retail, wholesale, metro, regional</td>
</tr>
<tr>
<td>Strawberries</td>
<td>Fresh</td>
<td>Contracts – supermarkets</td>
</tr>
<tr>
<td>Mixed berries</td>
<td></td>
<td>U Pick, Farm gate, Farmers markets</td>
</tr>
<tr>
<td>Eggs</td>
<td>Fresh</td>
<td>Wholesale</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Farm gate / Farmers markets</td>
</tr>
<tr>
<td>Alpaca</td>
<td>Stud breeders</td>
<td>Local, regional, interstate clients</td>
</tr>
<tr>
<td>Sheep</td>
<td>Fat lambs, Wool</td>
<td>Local market, Wool auctions</td>
</tr>
<tr>
<td>Aquaculture</td>
<td>Fresh mussels</td>
<td>Local, metro</td>
</tr>
<tr>
<td>Organic produce</td>
<td>Fresh organic – salad and vegetables</td>
<td>Farmer markets, delivery service, metro contracts, green grocers, retail</td>
</tr>
<tr>
<td>Honey</td>
<td>Honey products</td>
<td>Local farmers markets</td>
</tr>
<tr>
<td></td>
<td>Cosmetics</td>
<td>Retail outlets</td>
</tr>
</tbody>
</table>
Q 3). Are you intending to increase your production or diversify your business in the future?

- 80 respondents indicating YES they are intending to implement a change to their production system;
- 101 respondents indicating NO to any changes; and
- 59 respondents did not indicate either way.

Examples of responses to either YES or No are summarised in Table 7.

**Table 7. Summary of responses to increasing business diversity**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aim to double stocking rates through pasture regeneration</td>
<td>No production increases possible unless we can secure adequate irrigation water</td>
</tr>
<tr>
<td>Concentrating on pasture improvements and fencing to focus on grazing efficiencies</td>
<td>Age factor – retiring</td>
</tr>
<tr>
<td>Planting lemon, lime trees, olives, cherries,</td>
<td>Input costs are steadily eroding profit margins for cattle</td>
</tr>
<tr>
<td>Increasing wine production by 25% over the next 5 years</td>
<td>Holding is too small</td>
</tr>
<tr>
<td>Value add more to our farm gate / cellar door kitchen and increase vegetable and herb range</td>
<td>Green Wedge Zone restrictions</td>
</tr>
<tr>
<td>Considering free range egg farming</td>
<td>At capacity for system</td>
</tr>
<tr>
<td>Diversification – crop types</td>
<td>Downsizing</td>
</tr>
<tr>
<td>Producing high quality hay – weed &amp; seed free</td>
<td>Reducing due to kangaroo numbers</td>
</tr>
<tr>
<td>Identifying potential value added products for business</td>
<td>Biosecurity risks / restrictions</td>
</tr>
<tr>
<td>Changing vealer enterprise to steer fattening</td>
<td>Happy with low intensity system</td>
</tr>
<tr>
<td>Leasing more area for cattle grazing</td>
<td>Lack of water so nothing grows</td>
</tr>
<tr>
<td>Diversifying into nursery and orchard production</td>
<td></td>
</tr>
<tr>
<td>Expansion of sheds to accommodate additional broiler capacity</td>
<td></td>
</tr>
<tr>
<td>Looking at tourism potential</td>
<td></td>
</tr>
<tr>
<td>Nuts, rare animals and lucerne hay</td>
<td></td>
</tr>
<tr>
<td>Investigating nursery and flower production</td>
<td></td>
</tr>
</tbody>
</table>
Q 4). What opportunities do you think exist for agriculture and value added food production on the Mornington Peninsula?

Analysis of the responses for this question revealed a number of key themes that were repeatedly referred to throughout the 240 surveys. Comments have been individually assessed and linked to each theme that has emerged. Results are summarised below:

**Water**
- More opportunity with Class A recycled water for irrigation for grazing and general horticulture as we require Class A for any vegetable production;
- The Mornington Peninsula can produce a diverse range of products - herbs, garlic, exotic vegetables, honey, cheese, fruit - Access to recycled water opens up opportunities to value add;
- Would expand our horticultural activities if we had access to recycled water at a reasonable price;
- Water security – needs to be linked to long term climate change predictions for the Westernport region;
- The current restrictions on construction of new irrigation dams in Victoria is having an impact on the development of new and future agricultural production on the peninsula;
- The Mornington Peninsula is treated the same as all Victoria with respect to stream flows, which in the Mornington Peninsula case - stream flows are often flowing out to sea within 5 km of their source with a large amount of good quality water being lost. The ban forces farmers to attain water from other sources such as bore-water which may not be suitable for long term sustainable use due to its salinity/levels;
- Access flows when water is available and flexible timing;
- Production is unable to be increased unless we secure adequate irrigation water. The neighbours and ourselves are currently discussing with SE water the possibility of attaining grey water. There appears to be spare capacity in the system however red tape and levies applicable make this extremely costly; and
- The lack of irrigation water and council red tape are major obstructions to increasing production. Without the availability of water and support by council it is likely that existing farm production will be unviable resulting in property owners opting out of rural industries.
- Eastern treatment plant at Carrum will be ready to provide class A recycled water for use in the region, in 2012 – better define who will be the priority users of the water – is a proportion to be set aside for future agricultural development – incentives for investment where a water provision exists.

**Land prices**
- Unfortunately the land is too expensive to have economic agricultural pursuits without tourism or at least some kind of novelty/tourist option;
- Amount of finance required to purchase land is not feasible to get a proper return on outlay;
- Cost of labour and to provide housing too great;
- Specialist wine production / restaurant sales can be viable. Price of land & production costs on small holdings make viticulture unviable. Require larger holdings but then land prices make such acquisitions difficult. Unrealistic to expect viable food production on all but the largest holdings on the MP; and
- Not many opportunities as the price of land is so expensive and landlords expect high leasing rates.

**Soils**
- Soils largely determine potential production on the Mornington Peninsula, except for some intensive production such as greenhouses and broiler sheds. The red volcanic soils commonly support horticulture and vineyards and are potentially viable economic units. At the other end of the scale the poorly structured low fertility soils only support grazing and are not economically viable on the peninsula as they compete directly with similar productive units with much lower land values in other parts of the state and interstate.
- Very complex question - soils on the peninsula vary from place to place. Also rainfall variability for such a small region e.g. 1020 mm at Red Hill and 550mm at Pt Nepean,
- Better utilisation of agricultural land currently lying idle e.g. fodder production, broiler sheds
- Land capability statements could be useful across the region as was implemented by the old soil conservation authority.
Branding
- The Mornington Peninsula needs to become more like Margaret River with a better promotion and
  advertising campaign;
- Creation of a Mornington Peninsula "brand" for produce such as apples, cherries similar to
  Mornington Peninsula labelling for wines;
- More emphasis on local and regional production with discrete branding and promotion; and
- Mornington Peninsula beef brand – many small beef farms could collective produce and market a
  brand.

Gourmet - Value adding
- Thought might be given to the development of a local (cooperative) retail outlet for fruit and
  vegetables, cheese, preserves, wine and beer. This needs to be ongoing - centralising local farm gate
  sales which are costly for individual producers
- Co-operatives – e.g. the Mornington Peninsula Olive Association could investigate in sharing an olive
  crush or table processing equipment, revitalising Hemphill’s juice operation to save transport miles
  and farmers markets with basic, affordable sites for small lot growers;
- Boutique wine and food production sold at premium price for tourists – A limitation is the poor
  economics of scale though as overall production is too small;
- Artisan / organic / niche market / labour intensive produce is limited to tourism and lifestyle farms;
- Opportunity for the Mornington Peninsula to become recognised worldwide as Australia’s premier
  region for high quality chardonnay and pinot noir;
- Opportunity to become gourmet food and wine region with high quality, high value added product
  and can increase gourmet tourism - see recently published book "Mornington Peninsula Produce to
  Platter";
- Value added food production could be encouraged to expand especially on smaller acreage;
- We could open a small mini Queen Vic market type organisation - e.g. 3 days / week at Balnarring
  to sell local produce to include local angus beef; and
- The future for these areas appears to be lifestyle farming on a small scale where off farm income
  supports the farm. This leads to a range of small enterprises associated with farm production that
  lend themselves to supporting farmer’s markets.

Economics
- There are very few viable agricultural businesses on the Mornington Peninsula. Most producers have
  some other source of income but choose to live on there for the lifestyle. Intensive farming – is it
  sustainable?; and
- An emphasis on the value brought to the economic well being of the peninsula by vineyards and
  associated enterprises. The wine industry is active in attracting wealth accumulation to the region by
  employment and tourism.

Agri-tourism
- One of the premium wine growing regions in Australia which boosts tourism to the region;
- Huge - local, metro and tourists want fresh farm gate sales of ALL food;
- Endless opportunities - certified Demeter, sell fruit from the farm gate and at markets - would like to
  offer morning / afternoon tea during fruit ripening season
- Excellent opportunities, the area itself can be brilliant selling point with summer in particular a time
  when the regions swells with tourists often eager to spend; and
- Endless opportunities - 1.5 hours from Melbourne - Farm gate sales are massive potential but need
  community to support local enterprises and the tourism dollar it would extract.

Niche opportunities
- Citrus – Lemon and Lime;
- Artichokes, Walnuts, Saffron, Truffles, Gooseberries;
- Buffalo milk;
- Pomegranates; Avocados
- Trees – timber lots;
- Fodder – lucerne, high quality hay for equine, dairy industries; and
Industry expansion

- No expansion possible for broiler farms on the peninsula so opportunities to further develop the industry and employment opportunities are limited;
- Viticulture with small production of beef, cheese and market gardens has potential;
- Apples grow well;
- Good question - with a new multi-million dollar plant for chickens they are looking for expansion in the growing facilities; and
- Could develop a “green beef” cattle network and accreditation which council could support and encourage this;
- Would benefit from a larger local oil processor - our fruit currently pressed in Kyneton;
- Very few other than vegies and wine; and
- I intend to improve my hay by seeding & fertilising. My aim is to produce top of the range pasture hay with no weeds (eradicate cape weed).

Planning

- Provided the “right to farm” is properly implemented, changes are made to free up retail sales in the green wedge, shire is sympathetic with rates, small land owners are supported by industry groups - I believe a good future for sustainable agribusiness on the MP;
- Better understanding between planning and what is value adding. Need support from council to work towards better outcomes for all parties;
- MP has little opportunity whilst current legislation is in place in all areas - poultry farmers are unable to increase production;
- Good market size but too many rules and regulations limiting production + too many people with competing interests;
- Flexibility needed in planning scheme to allow for growth in culinary tourism;
- Planners need to understand what drives the Mornington Peninsula and the significant impact they can have on economic development both from a local, state and federal stand point;
- Planners need to understand the significant impact they have on financial investment in the region;
- To have a sustainable rural activity within the green wedge the planning department and the shire as a whole should be supporting growers in all activities not a barrier to business;
- A value chain is about adding value all the way through the supply chain from both a horizontal and vertical stand point. The more growers can value add and control costs /processes in their own supply chains, the greater their ability will be to be sustainable in the long term. Surely this is critical to the success of the Mornington Peninsula region, if it is going to retain any rural activities; and
- The only way this is achievable is through the ability of growers to value add their products from the paddock to the plate or from the soil to the end consumer.

Organic

- Organic production increases in region;
- Organically grown food for the Melbourne market; and
- Demand for local produce is increasing from food business – e.g. Health food stores.

Equine

- Small bale hay - good quality, possibly with pasture - to make the product more suitable for horses
- Identify opportunities to supply high quality fodder to the lucrative, local equine industry;
- Opportunity for lucerne hay to be grown on certain soil types especially, where water table and salt incursions are present near the soil surface, to produce high quality hay for the local industry.

Urban / rural tension

- Weed and vermin control is a constant issue;
- Domestic dog attacks especially at night on animals;
- Lack of maintenance of gravel roads, Cattle trucks have difficulty with tree overhang;
- Plastic contamination in hay samples, Rubbish dumping;
- Rabbits, birds damage – lorikeets; and
- Kangaroo populations in adjoining nature reserves are invading paddocks and destroying pasture but no culling program is available.
Q 5). Are you a member of any local industry associations?

This question was asked to determine which types of industry networks were well established in the region or where there were opportunities for the Shire to facilitate stronger linkages between key stakeholder groups in the future.

The top five industry organisations that land holders are linked into are all locally based including the local Victorian Farmers Federation branch. In total 116 out of 240 or 48% of respondents were linked to at least one industry association to keep abreast of new or emerging technologies, keep up to date with relevant regulations or quality assurance guidelines and general awareness raising of issues of relevance. See Table 8 for summary of industry membership details.

Table 8. Local industry association membership

<table>
<thead>
<tr>
<th>Industry organisations</th>
<th>No. of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mornington Peninsula Vignerons Association (MPVA)</td>
<td>30</td>
</tr>
<tr>
<td>2. Victorian Farmers Federation (VFF)</td>
<td>25</td>
</tr>
<tr>
<td>3. Mornington Peninsula Tourism (MPT)</td>
<td>13</td>
</tr>
<tr>
<td>4. Mornington Peninsula Gourmet (MPG)</td>
<td>10</td>
</tr>
<tr>
<td>5. Mornington Peninsula Olive Association (MPOA)</td>
<td>7</td>
</tr>
<tr>
<td>Land Care</td>
<td>5</td>
</tr>
<tr>
<td>Mornington Peninsula Fruit Growers</td>
<td>5</td>
</tr>
<tr>
<td>Meat &amp; Livestock Australia</td>
<td>4</td>
</tr>
<tr>
<td>Mornington Peninsula Tourism - Hinterland</td>
<td>3</td>
</tr>
<tr>
<td>Mornington Peninsula Tourism - Westernport</td>
<td>2</td>
</tr>
<tr>
<td>Fresh @ the Farm Gate</td>
<td>2</td>
</tr>
<tr>
<td>Mornington Peninsula Alpaca Breeders Association</td>
<td>2</td>
</tr>
<tr>
<td>Demeter Biodynamic Ag</td>
<td>2</td>
</tr>
<tr>
<td>Truffle Growers Association</td>
<td>1</td>
</tr>
<tr>
<td>Nurseryman’s association</td>
<td>1</td>
</tr>
<tr>
<td>Seed growers Association</td>
<td>1</td>
</tr>
<tr>
<td>Victorian Cherry Association</td>
<td>1</td>
</tr>
<tr>
<td>Avocados Australia</td>
<td>1</td>
</tr>
<tr>
<td>Australian Blueberry Association</td>
<td>1</td>
</tr>
</tbody>
</table>

Q 6). How do you access new research / technology for your enterprise?

Key communication and information exchange pathways for knowledge and awareness of new technology for respondents included:

1. Internet
2. Field days
3. Industry associations
4. Industry publications
5. Newsletters

This data is important to identify appropriate landholder engagement and communication strategies for dissemination of timely and relevant information. For example – the use of E Bulletins, the Shire web site and other methods of signposting for information access.
Q 7). Is there any other general information regarding agricultural production you may like to include in your input?

<table>
<thead>
<tr>
<th>Summary of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Successful agriculture on small acreage is reliant on value adding e.g. wine &amp; cheese making, Olive oil;</td>
</tr>
<tr>
<td>- List of contractors for land management e.g weed control;</td>
</tr>
<tr>
<td>- High value land impacts on profitability of new enterprises;</td>
</tr>
<tr>
<td>- Farms are small and is only part of my total income but we still provide employment to a range of local rural contractors – fencing, vets, stock agents, transport etc;</td>
</tr>
<tr>
<td>- Land is too expensive for commercial and profitable activities;</td>
</tr>
<tr>
<td>- Dwellings in the Green Wedge Zone where they can produce farm goods for sale;</td>
</tr>
<tr>
<td>- Would like to see a return to land capability statements as was implemented by Soil Conservation Department;</td>
</tr>
<tr>
<td>- An emphasis on the value brought to the economic well being of the peninsula by vineyards and associated enterprises;</td>
</tr>
<tr>
<td>- The wine industry is active in attracting wealth accumulation to the region by employment and tourism;</td>
</tr>
<tr>
<td>- Farmers and agriculture do a lot to maintain and present the countryside in a favourable light to visitors;</td>
</tr>
<tr>
<td>- Problems with the interface between urban and rural dwellers who do not fully understand and appreciate the importance of timely agricultural management operations;</td>
</tr>
<tr>
<td>- Need for more action on weed / pest control;</td>
</tr>
<tr>
<td>- Big opportunities when Class A water is available from the Eastern Treatment Plant;</td>
</tr>
<tr>
<td>- We are very focussed on becoming sustainable in everything we do;</td>
</tr>
<tr>
<td>- Believe it is important to maintain agricultural production on the Mornington Peninsula;</td>
</tr>
<tr>
<td>- Increased salinity and climate change areas need more research.</td>
</tr>
</tbody>
</table>
**Semi-Structured Interviews**

Semi-structured interviews were conducted with 28 landholders who were representative of key production systems. The focus for questions was around the themes below:

- Identification of the range of agricultural production systems within the shire;
- Update knowledge on the value and contribution of agriculture to the regional and state economy;
- Determine the quantity and value of production on a per industry basis (tonnage, total area grown, quality, $ value);
- Identify key networks that support research and development, capacity building, marketing and strategic funding opportunities;
- Summarise key markets for produce – local, regional, intra / interstate and export points of sale; and
- Highlight opportunities for raising the profile of agriculture and value added food and its productive value within the shire.

A Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis was compiled to summarise the semi-structured interview responses that were undertaken with a number of agribusinesses in the region.

Assessing the status of regional agricultural production strengths, weaknesses, opportunities, and threats through a SWOT analysis offers powerful insight into the potential and critical issues affecting future project planning, prioritisation and implementation of effective rural development activities.

Table 9 summarises the key responses and issues raised from the interviews. These results along with the survey data provide solid baseline information from which future project prioritisation and planning platforms can be developed and implemented in collaborative partnerships between the shire and agribusiness for mutual benefit.

Production data was compiled from information gathered from the semi-structured interviews, survey data and other data sets as outlined in the project methodology. Table 10 summarises the variety of agricultural produce grown in the region and outlines the following:

- Specific product type;
- Quality and Quantities (where available);
- Average current price units received; and
- Approximate total industry estimated value of gross production (where confidence in data enables accurate estimates to be made).
### Table 9. Agriculture on Mornington Peninsula – SWOT summary

<table>
<thead>
<tr>
<th>Strengths - positive attributes, tangible and intangible, internal to the region.</th>
<th>Weaknesses — are factors within your control that detract from your ability to obtain or maintain a competitive edge. Which areas might we improve?</th>
</tr>
</thead>
</table>
| • Location is an asset as we are close to large population and consumer markets which are easily accessible;  
• There is a broad scale and diversity of production across the region;  
• Seasonality of production is linked to crop adaption & varieties;  
• The Maritime climate – provides a “heat sink” to buffer temperature impact on crop production, especially ripening period, ensuring production consistency and high quality;  
• The region is capable of producing high quality / premium product – reflected by numerous industry awards;  
• Strong industry networks for chicken meat, beef, vegetable, olive, alpaca, wine, fruit growers;  
• Tourism access – approximately 5 million people visiting the region each year;  
• Soil type and agricultural production systems are strongly linked to maximise yields;  
• The region can produce fresh produce across 12 months enabling a broad varietal mix of crops and livestock;  
• Wholesale markets and regional saleyards are in close proximity for daily & weekly sales of large produce consignments;  
• Lack of frost enables certain vegetables to be grown all year round;  
• Landscape vista is highly prized particularly for its amenity value both locally and its appeal to tourists; and  
• Substantial private land management delivers public benefits in terms of landscape appearance all year round. | • Poor strategic agricultural profile for the region – region not linked to high level of awareness of actual production capacity;  
• General lack of awareness of what we “really” grow, how much and when and where, especially between growers and food retailers;  
• Minimal Research & Development, Extension investment and support from Rural Development Corporations due to limited understanding of regional agricultural production capacity;  
• Lack of water security in some parts of the shire limits agribusiness confidence in building productive capacity through capital investment;  
• Ad hoc land holder and strategic rural networks;  
• Limited general extension and educational activities and support from DPI, Vic;  
• Limited links into other agribusiness networks in interface or peri-urban shires – at on-ground level;  
• Lack of access to rural based think tanks, networks and funding grants;  
• Limited local processing facilities for food production;  
• Ad hoc communication and knowledge exchange networks on industry specific issues. |
<table>
<thead>
<tr>
<th>Opportunities - What opportunities exist for our region from which we can benefit?</th>
<th>Threats – The region is limited in its control but may benefit by having contingency plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Building collaborative partnerships with key stakeholders across the Bunyip Food Belt to embed food security into an MP rural development strategy</td>
<td>• “Interface” council status is currently prohibitive of partnership development with Regional Development Victoria and limits access to rural and regional funding;</td>
</tr>
<tr>
<td>• Strengthen the regional profile and brand through promotion and awareness raising opportunities – trade shows, conferences, regional / rural events, field days, restaurant networks and trade missions;</td>
<td>• Water security – cost of purchase price unrealistic for some small scale production systems based on enterprise size and landuse;</td>
</tr>
<tr>
<td>• Strengthen connectivity between agricultural producers and food users especially retailers with a regional inventory of what is grown – when, where, how, seasonality influences, purchasing pathways and local access;</td>
<td>• Water access and restrictions on pumping amounts, on-farm storage options and timely harvesting of water from intensive rainfall events;</td>
</tr>
<tr>
<td>• Development of an agri-food trail to showcase agriculture and associated value added goods links health and educational programs;</td>
<td>• Unrealistic land prices prohibitive of new investment in agricultural development– competing against other rural regions where land price is not as prohibitive to invest in for producing economical viable agricultural goods;</td>
</tr>
<tr>
<td>• Promoting value adding agricultural production “on site” e.g. low carbon miles, local quality, fresh quality;</td>
<td>• Green Wedge Zone - planning restrictions in rural zone to pursue particular value added activities and diversified their onsite investment portfolio;</td>
</tr>
<tr>
<td>• Investigate opportunities to strengthen a cooperative Mornington Peninsula Ag brand – for different enterprises under a collective umbrella (oils, fruits, beef, vegies);</td>
<td>• “Right to farm” – amicable interactions with rural and urban is tenuous and potentially litigious;</td>
</tr>
<tr>
<td>• Identify key stakeholder needs in more detail and scope relevant projects to access funding and meet needs;</td>
<td>• Soil loss to urbanisation – landscape shifts that cannot be reversed and agricultural production restricted permanently;</td>
</tr>
<tr>
<td>• Investigate water security options to build confidence that there is adequate and timely availability for commercial use outside of the current irrigation schemes;</td>
<td>• Climate change – rainfall distribution pattern changing – decreasing by 8% or 50mm / decade;</td>
</tr>
<tr>
<td>• Strengthen local, regional, rural, metro, peri-urban networks;</td>
<td>• Urban growth and amenity aspirations for rural living faced with pollution, noise, traffic, spray drift, odour etc causes tension and complaints;</td>
</tr>
<tr>
<td>• Green wedge zone to review support for appropriate agricultural opportunities for diversification and expansion especially in the small crop or boutique production on a micro-scale;</td>
<td>• Visual intrusions to landscape e.g. An increase in hot houses, netting, road infrastructure etc that alter the MP natural environment;</td>
</tr>
<tr>
<td>• Supporting niche production with planning and regulation – small in quantity but quality consistency for the high end market – large focus for region BUT huge potential for casting the net further based in people with less purchasing power but local enough for day trips to the region;</td>
<td>• The presence of stray town dogs, vandalism &amp; trespass, noxious and environmental weeds, theft, rubbish dumping and contamination of pasture and hay products with plastic; and</td>
</tr>
<tr>
<td>• Implement relevant technical extension and capacity building programs through DPI, PPWPCCMA;</td>
<td>• Kangaroo populations are encroaching on private land to graze pastures resulting in ruined fences, potential road hazards and decreased productive capacity of livestock systems.</td>
</tr>
<tr>
<td>• E – Bulletin – link relevant stakeholders into a regular communication network through bi-monthly circulation of a “rural roundup”.</td>
<td></td>
</tr>
</tbody>
</table>
### Table 10. Agricultural production data for the Mornington Peninsula Shire

<table>
<thead>
<tr>
<th>Product</th>
<th>Quantities</th>
<th>Price units (ave)</th>
<th>Industry impact</th>
<th>Estimated annual gross value of agricultural production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables</td>
<td>Tonnage values hard to estimate 30 commercial growers in the region</td>
<td>Based on market demand and supply</td>
<td>Significant vegetable and salad mix production region for Victoria</td>
<td>$170 million based on average weekly turnover estimates (VGA &amp; ABS, Farm Consultant)</td>
</tr>
<tr>
<td>Wine grapes</td>
<td>200 vineyards 900 ha 6100 tonne yield in 2008 Ave yield 6.8 tonne / ha</td>
<td>$ 2500 / tonne of grapes dependent on quality</td>
<td></td>
<td>$72.8 million - 350,000 cases @ $ 208 / case</td>
</tr>
<tr>
<td>Beef cattle</td>
<td>25000 – 30,000 head / year by livestock carriers</td>
<td>$1.75-1.8 / kg @ 600kg animal = Ave $1000 / hd</td>
<td>On average small grazing unit’s with high feed availability</td>
<td>$ 25 million livestock and livestock products</td>
</tr>
<tr>
<td>Broilers</td>
<td>125m birds / year 10% Free range component 64 Sheds</td>
<td>72c / tunnel vented bird 69c / non tunnel vented 78.45c / free range bird</td>
<td>111m broilers produced 14.8m free range produced Total sales generated from MP is 350m / pa</td>
<td>$80 million</td>
</tr>
<tr>
<td>Pullets</td>
<td>9 farms</td>
<td>$10 / bird</td>
<td>350,000 pullets grown / yr</td>
<td>$3.5 million</td>
</tr>
<tr>
<td>Eggs</td>
<td>5 farms – 136500 caged birds 3000 free range birds</td>
<td>0.15 c / cage egg 0. 30c / free range egg</td>
<td>46.4 m cage eggs 1.02 m free range eggs</td>
<td>$6.97 m cage $300,000 free range</td>
</tr>
<tr>
<td>Apples</td>
<td>120,000 boxes @ (12-13 kg) / box</td>
<td>2.50 / kg 4.50 / litre juice</td>
<td>8-10 commercial producers Emerging tree planting technology has the potential to increase production by 50%</td>
<td>$4 million</td>
</tr>
<tr>
<td>Product</td>
<td>Description</td>
<td>Value/Production</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cherries</td>
<td>5-10 t / ha&lt;br&gt;U Pick&lt;br&gt;Small industry with 3 main cherry producing farms + some apple orchards growing cherries</td>
<td>$8-10 / kg @ 100 tn = $1m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avocados</td>
<td>8 growers&lt;br&gt;5700 trees&lt;br&gt;250,000 fruit / 2009 season&lt;br&gt;$1.00 / fruit</td>
<td>Small but strategically timed production to meet out of season demand in the Melbourne market</td>
<td>2009 - $250,000&lt;br&gt;Projected increase to 2m &lt; 10 yrs</td>
<td></td>
</tr>
<tr>
<td>Olives</td>
<td>20 kg / ha x&lt;br&gt;200,000 trees = 4000tn x 15% x 1.1 = 660,000 litres&lt;br&gt;$7 / litre wholesale&lt;br&gt;$15 / bottle retail&lt;br&gt;$12/kg – table olives</td>
<td>Current planting estimates at 250,000 trees&lt;br&gt;$4.6 million</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strawberries&lt;br&gt;Mixed berries</td>
<td>2000 tonne fresh fruit&lt;br&gt;8 million punnets&lt;br&gt;$2 / punnet</td>
<td>MP Shire accounts for 10% of Victorian strawberry production&lt;br&gt;U pick facility generates 300,000 tourist / 6 month growing season</td>
<td>$16 million</td>
<td></td>
</tr>
<tr>
<td>Hay</td>
<td>63 properties producing some tonnage of hay&lt;br&gt;$40 - 45 / round bale</td>
<td>Most hay is being produced for internal property usage&lt;br&gt;Hay quality is questionable and mainly grass pasture</td>
<td>$2 million&lt;br&gt;(ABS 2006)</td>
<td></td>
</tr>
<tr>
<td>Alpaca</td>
<td>600 breeding stock&lt;br&gt;17 properties&lt;br&gt;$1500 / per stud male&lt;br&gt;$1250 – $15,000</td>
<td>Breeders is committed to the development, promotion, and marketing of quality alpacas and their fibre</td>
<td>No accurate data available</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td>Ad hoc – estimates 5% of total livestock – 5000 hd</td>
<td>Small industry in the region with many people citing dog attacks as a reason they have shifted to cattle&lt;br&gt;Fencing upgrades would be needed if replacing cattle with sheep in system</td>
<td>$5 million&lt;br&gt;(ABS 2006)</td>
<td></td>
</tr>
<tr>
<td>Category</td>
<td>Details</td>
<td>Price/Value</td>
<td>Remarks</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>-------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Aquaculture</td>
<td>Mussel farming, Commercial fishing</td>
<td>$1.80-2.50 / kg Wholesale</td>
<td>Promotion – region offering some of the largest and cleanest waters located close to markets, labour and established infrastructure 590 ha farms</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10 m - Aquaculture potential 805 hectares, 400 jobs $15M turnover</td>
<td></td>
</tr>
<tr>
<td>Truffles</td>
<td>Yield potential -</td>
<td>$2000–3000 / kg</td>
<td>Truffles - Industry establishment phase</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NA – Crop establishment and industry development phase</td>
<td></td>
</tr>
<tr>
<td>Saffron</td>
<td>5 saffron growers</td>
<td>$35 / gram</td>
<td>1 kg of saffron from crocuses stigma's =&gt; 250,000 flowers must be hand picked, dried and bottled which is incredibly labour intensive.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NA – Local industry establishment phase</td>
<td></td>
</tr>
<tr>
<td>Dairy – goats</td>
<td>170 goats / one main herd</td>
<td>Price units not available</td>
<td>175 milking herd producing 100,000 litres / annum</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Nursery / flowers</td>
<td>Large scale production nurseries scattered across the region Wholesale focus</td>
<td></td>
<td>Significant production in the region according to the Nursery &amp; Garden Industry, Victoria however no accurate figure available</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20m (ABS 2006 estimates)</td>
<td></td>
</tr>
</tbody>
</table>
FOOD BUSINESS SURVEY RESULTS

The food business sector across the Mornington Peninsula Shire has been identified as an important stakeholder in this project. As an end user of fresh and / or packaged produce in their business on a daily basis, this audience was targeted to gain a better understanding of what opportunities or restrictions exist that influence the ability to utilise as much local produce as required to meet your food processing and customer needs.

440 surveys were sent to local business identified from the Shire’s Environmental & Food Health database. There were 50 respondents indicating a return rate of 11.36%. Feedback regarding the purchasing capacity and use of local produce were deemed relevant to the audit by providing a snapshot of where gaps in awareness of local produce networks exist and what type of local produce is sought for processing. A summary of this relevant information has been included, however there is more detailed dialogue required with this target audience to qualify statements made and quantify produce needs in more detail.

Q 3). Would you like to be able to purchase more local produce to use in your business?
24 respondents indicated they would like to be able to source and purchase increased amounts of local produce for their business. Examples of products people would like to be able to source locally are summarised in Table11.

Table 11. Summary of local produce purchasing requests

<table>
<thead>
<tr>
<th>Product type</th>
<th>Quantity (amount in order)</th>
<th>Frequency (eg. all year, seasonal)</th>
<th>Buying outlet (e.g. Direct purchase, Supermarket etc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruit / veg</td>
<td>Various</td>
<td>All year</td>
<td>Farm gates</td>
</tr>
<tr>
<td>Seafood</td>
<td></td>
<td></td>
<td>Local supplier</td>
</tr>
<tr>
<td>Juice grade apple</td>
<td>2 tn / day</td>
<td>All year</td>
<td>Direct purchase</td>
</tr>
<tr>
<td>Strawberries</td>
<td>6 kg / week</td>
<td>Seasonal</td>
<td>Direct purchase or wholesale</td>
</tr>
<tr>
<td>Cherries</td>
<td>3 kg / week</td>
<td>Seasonal</td>
<td>Direct purchase or wholesale</td>
</tr>
<tr>
<td>Figs</td>
<td>3 kg / week</td>
<td></td>
<td>Direct purchase</td>
</tr>
<tr>
<td>Potatoes</td>
<td>10 / week</td>
<td>All year</td>
<td>Direct purchase</td>
</tr>
<tr>
<td>Artisan bread</td>
<td>?</td>
<td></td>
<td>Direct purchase</td>
</tr>
<tr>
<td>Locally harvested native herbs + spices</td>
<td>10 + kg</td>
<td>All year</td>
<td>Direct purchase</td>
</tr>
<tr>
<td>Eggs</td>
<td>2 doz</td>
<td>Week</td>
<td>Direct purchase</td>
</tr>
<tr>
<td>Free range meats</td>
<td>?</td>
<td>All year</td>
<td>Direct purchase</td>
</tr>
<tr>
<td>Poultry</td>
<td>?</td>
<td>All year</td>
<td>Direct purchase</td>
</tr>
<tr>
<td>Lettuce</td>
<td>?</td>
<td>All year</td>
<td>Local supplier</td>
</tr>
</tbody>
</table>
Q 4) What opportunities do you think exist for strengthening networks between agricultural production and food business's across Mornington Peninsula?

<table>
<thead>
<tr>
<th>Networking</th>
<th>Awareness</th>
</tr>
</thead>
<tbody>
<tr>
<td>o Availability of produce , price and seasonality as well as delivery network would greatly enhance our ability to showcase the produce available</td>
<td>o Signage on farms</td>
</tr>
<tr>
<td>o Only viable if restaurants know about such networks and is competitive pricing</td>
<td>o Having a show / food fair in one place and inviting businesses - it is far easier to go and learn about products in one place</td>
</tr>
<tr>
<td>o Creating more business networks (meetings, newsletters, internet)</td>
<td>o In Europe local councils operate food co-ops, encourage farmers markets and support &quot;Farm gate&quot; and kitchen garden scheme</td>
</tr>
<tr>
<td>o Huge networking opportunities to link producers to users.</td>
<td></td>
</tr>
<tr>
<td>o Network meetings, getting to know others and what they do</td>
<td></td>
</tr>
<tr>
<td>o Signage on farms</td>
<td></td>
</tr>
<tr>
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<tr>
<td>o Network meetings, getting to know others and what they do</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Communication / capacity building</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>o Websites from producers to business informing them of bulk purchase price</td>
<td>o Local buying network with on line access to buying direct from suppliers / growers / farmers</td>
</tr>
<tr>
<td>o Direct mail or email</td>
<td>o Farmers markets / Farm gate selling opportunities</td>
</tr>
<tr>
<td>o Producers could do a small video of their product and down load it onto youtube</td>
<td>o Strong presence in local shops selling direct rather than going to Melbourne market</td>
</tr>
<tr>
<td>o Support for producers - many are small and don't have the time to both produce and market their goods</td>
<td>o Farm deliveries</td>
</tr>
<tr>
<td></td>
<td>o The opportunity is there are long as the wholesaler takes on the middle man position between the growers and the food businesses</td>
</tr>
<tr>
<td></td>
<td>o Making available smaller, pre-packaged quantities for B&amp;B's that are self catering</td>
</tr>
<tr>
<td></td>
<td>o Centralised wholesale warehouse for meat, veg, cheese, fruit etc - They are available but the distance between each other makes purchases impossible</td>
</tr>
<tr>
<td></td>
<td>o I believe there is a huge opportunity for a MP distributor enabling food businesses around to feature local produce and provisions in a hospitality environment as well as retail</td>
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</tr>
</tbody>
</table>
**DISCUSSION**

Unique regional characteristics (including soil types and climate) mean agricultural production across the Mornington Peninsula Shire is rich in diversity and scale of production. The regional area for agricultural production is approximately 240 km² which is about 33% of the total land mass (720km²).

This figure of 240 km² for agricultural production in the landscape has been calculated from the total amount of hectares of land parcels that qualify for the farm land rate in the shire. To qualify for this rate, landholders must be able to demonstrate that some level of agricultural production is being implemented on this parcel with the purpose of deriving a profit, currently or into the future.

The remaining 40% of the rural zone comprises bushland reserves, crown land, recreational reserves, national parks, water reservoirs, roads and water ways, equine facilities and lifestyle holdings that do not qualify for the farm land rate.

**Agri-business structure**

The survey data was able to provide a snapshot indicating there is solid mix of scale and diversity of agricultural production in the region. Intensive horticulture (grapes, vegetables, salad mix and berries) and intensive chicken meat farms generate substantial amounts of produce and contribute strongly to the Port Phillip and Westernport figures of 15% of state agricultural production on 4% of the land. The beef cattle components of the landscape represent small, separate production systems but collectively numbers are quite substantial for the area.

Many businesses are of a micro-nature due to land size, labour units and gross annual production and rely heavily on meeting top quality benchmarks for economic returns. Results do show a strong focus on high quality product and quite specific sale points that indicate lucrative price markets are targeted to generate profitable returns. However, it must be stated that detailed economic analysis of business viability of enterprises has not been undertaken to date. Feedback from respondents indicates that profitability of agricultural production systems is constrained by the following factors:

- Rural land prices in the region
- Land size restrictions on production capacity and capital investment infrastructure
- Insurance costs
- Energy costs – especially electricity
- Input costs – fuel, fertiliser, chemicals etc
- Commodity prices
- Rates and tax levies on land parcel values
- Return on Equity potential
- Off – farm income supplementation to support agri-business
Land ownership demographics
There is also quite a large degree of absentee land ownership. In such a small rural region it could be indicative of the following:

- A fragmented rural production landscape where off-farm pursuits for income are quite high and farming is only seen as a part-time business or hobby focus;
- Investment in technology is limited and systems are not pushed to the limit to maximise yield and profit, thus maintaining soil health and ground cover especially where stocking rates are lower than their potential; and
- Low maintenance agricultural production systems are undertaken such as beef cattle enterprises which focus on store cattle and fattening operations which are less time intensive and do not require constant presence at critical times such as calving.

Data collected from the GIS aerial maps supports the above assumptions with approximately 750 properties identified as a grazing or in some indentified cases more specifically beef cattle properties, with a median land parcel size of 15.5 ha. The small parcel size and annual production generated could be seen as indicative of the role of agriculture in the landscape – very minimal focus on it as a commercially viable core business.

Therefore, the following questions need to be clarified to better determine what role agriculture does play in this region and importantly what vision the council has for its position in the landscape in the future:

1. How do we better define the agricultural component of the Mornington Peninsula in terms of role in the landscape given the current 30% urban - 70% rural commitment?
2. Does commercial agriculture have a long term position in this peri-urban landscape? If yes, how, where & why?
3. What type of rural profile does the region want to strengthen as a reference point to regional identification and branding?

Given the current estimates of the value of agricultural production, there are numerous opportunities for the shire to have an active and integral role in ensuring the peri-urban nature of the region is embraced and looked upon as an important asset.

Opportunities for action
The report has detailed the scale and diversity of commercial agricultural and the multi-dimensional contexts by which it needs to be valued. Landholder engagement and feedback has highlighted eight key areas where opportunities are evident in the short and medium term and do not require significant funding investments to achieve tangible outcomes.

In the longer term, leveraging increased internal and external investment and collaborative partnership building will have the potential to generate multiple benefits to the region in terms of economic, environmental and social resilience. Agribusiness related opportunities from the audit have been identified and are aligned, where applicable, to specific recommendations from the Inquiry into Sustainable Development of Agri-Business in Outer Suburban Melbourne. They include the following:
Bunyip Food Belt (BFB)

The Shire is already committed to its support and involvement in the Bunyip Food Belt project. Through the continued protection of highly valuable agricultural land from urban growth, provision of water security for production and establishment of a major food distribution centre in the region, these strategies embed critical long term commitments to food availability within close proximity to a large population of consumers.

Representatives from Casey, Cardinia and Mornington Peninsula Councils and water authorities have set up a working party to scope a pre-feasibility study, with the ultimate aim being to re-use up to 26 gigalitres of water each year of the 120 gigalitres per annum south-east outfall that discharges at Gunnamatta (2009 Dench et al).

The Bunyip Food Belt project primarily looks at engagement and implementation strategies with large commercial scale growers. Intensive horticulture therefore is a flagship for exploration of water allocation and identification of landscape potential in a region where further development could occur.

The shire has an integral role in identifying areas within the region where potential expansion of activities may be encouraged on specific soils types. Understanding soil type and identification of any constraints through soil analysis and interpretation is critical for any production system. Various management techniques can be implemented to reduce the impact of some soil characteristics on yield whilst some soils may need to be reviewed and matched to alternative land uses to ensure long term sustainability.

Detailed soil mapping will help identify more specific land use zones including where poor soil quality could still have a role in supporting intensively farmed enterprises such as poultry, hydroponics or fodder production. By-products that are traditionally destined for landfill could be redirected and used as organic carbon sources to build soil fertility and production capacity. Analysis of the Bunyip Food Belt Land Capability and Environment & Cultural Heritage Assessment report needs to be undertaken to determine what localised land capability issues need to be addressed in a regional context.

Also, the expansion of agricultural productivity may not necessarily be limited within the Tyabb Intensive Agricultural Zone as is currently earmarked. There may well be other areas within the Special Port Zone that are well suited to specific agricultural activities.

The Shire commitment in the Bunyip Food Belt project aligns with the following recommendations from the Inquiry into Sustainable Development of Agribusiness in Outer Suburban Melbourne:

Recommendation 1
That the Victorian Government ensure that future iterations of Melbourne metropolitan strategies, including Melbourne 2030, recognise the importance of agriculture in the Port Phillip and Western Port region.

Recommendation 60
That the Victorian government encourage the development of clusters of hydroponic greenhouses in those peri-urban areas which are unsuitable for soil based agriculture and have access to Class A recycled water.

Recommendation 84
The Victorian government develop a comprehensive food strategy for the Melbourne region which integrates agricultural policy with land use planning.
**Supporting Value-Added Processing in the Green Wedge Zone**

A key theme emerging from the audit is the price of rural land within the shire. The increasing land values limit people in their financial capacity to purchase extra land. The average holding size is less than 20 ha and opportunities to increase productive capacity by land size are limited by land purchasing barriers.

Investigating how current planning regulations in the Green Wedge Zone can support value adding in terms of food processing and sales, agri-tourism ventures or capital investment is critical for long term business risk management. This may ensure a long term agricultural focus is maintained but free up planning restrictions to enable on-farm value added strategies to be implemented.

Interactions with the Strategic Planning unit have been occurring, but in a limited capacity up to this point. This is because the audit has focused on determining current production baselines and identifying issues associated with business risk management and expansion pathways on farm land in the region.

The support for value adding and direct sales within the Green Wedge Zone align with the following recommendations from the Inquiry into Sustainable Development of Agribusiness in Outer Suburban Melbourne:

- **Recommendation 64** - That the Department of Planning and CD – consult with interface local councils on amendments to the Victorian Planning provisions to allow the direct sale of value added produce in the green wedges.
- **Recommendation 65** - That the Vic government ease restrictions on farm shops in the green wedge zone
- **Recommendation 66** - The Vic government assists with organisations across peri-urban Melbourne to conduct studies of local food supply chains and develop provedoring or similar services, with the aim of supporting local producers and increasing the consumption of local produce

**Mornington Peninsula Branded Produce**

There are hundreds of small acreage, existing operations scattered across the peninsula landscape who minimal impact in terms of price setting for product. Cooperative type arrangements have been suggested by both survey respondents and interviewee’s as possible outlets for establishing a Mornington Peninsula regional brand that signifies the many aspects of the region that are appealing to the consumer e.g. quality assurance, freshness, local effort, carbon & food miles, environmental management, transport efficiencies and triple bottom line elements more strongly aligned to product branding.

Collectively, many of these small producers would be able to provide a consistent supply of product and connect individual producers within an industry in some way to become more significant as food producers.

The beef industry is an example where people have indicated they are very interested in increasing stocking rates, improving pasture management and overall productive capacity in the region. There has been support from retailers for an MP Beef brand to compliment the local fruit & vegetable accessibility that the region has on offer.
Strengthening regional branding also provides the opportunity to enhance the experience and satisfy the taste desire of the increasing tourist visits by the culinary consumer to come and savour regional produce. By better promotion of what defines the Mornington Peninsula Region in terms of food, wine, seasonality and climate, a stronger identity and connection with food and artisan product has great potential to tap into the consumer who’s awareness has been raised through various mediums such as television, newspaper, internet and word of mouth.

Exploration of cooperative ventures linked to market demand is an exciting opportunity for the region to become more entrepreneurial and strategic is its approach to encapsulating regional attributes as a strong selling point. Mornington Peninsula Gourmet has branding labels available for individual products made in the region which is a good starting point. There are already solid linkages between the Shire and Mornington Peninsula Gourmet which provides a good platform from which further projects may develop that take a strategic approach to branding and awareness raising in a whole of region context.

The support for strengthening awareness of fresh quality produce and connections to the region through a strategic brand align with the following recommendations of the Inquiry into Sustainable Development of Agribusiness in Outer Suburban Melbourne:

- **Recommendation 74** - That the DPI examines the feasibility of establishing a “Melbourne” food brand or similar to identify and promote locally produced food.
- **Recommendation 76** - That the Victorian Government expand public awareness of the health and other benefits of eating fresh, locally produced foods.

**AGRI-TOURISM**

The Mornington Peninsula region attracts approximately 5 million tourists annually for day trips and overnight excursions or longer holidays. The diversity of produce in such close proximity, due to the peri-urban nature of the landscape, is huge. Survey respondents and interviewee’s acknowledge the region is a rich in the variety of production systems that could become a great connecting pathway between people and food production.

There are a number of business’s who already offer a “hands on” experience in terms of picking produce or watching farm activities being undertaken such as olive picking, goat milking, wine bottling and preparation, cooking and tasting local produce. However, there are opportunities to strengthen the connections between a range of “hands on” experiences to create an educational and awareness trail throughout the region, focusing on a fresh food trail providing numerous hands of food experiences with a range of farm produce including avocados, olives, berries apples, cherries, vegetables and livestock.

These types of experiences could target both local residents and tourists to increase exposure to the basic fundamentals of food production in an interactive manner and compliment current tourism strategies.
At a local level there is also an increased need for joint economic development and tourism projects to further develop the Mornington Peninsula's agri-tourism product. This form of tourism, while quite established in the region, has potential to grow further, as identified in the 5 year Tourism Marketing Development Plan (this plan is to be reviewed in 2010). The types of projects to be implemented to support agri-tourism include:

- Assisting agriculture businesses to diversify into tourism, thereby having a multi facet business;
- Promotion of farm gate tourism;
- Strategic branding of the food and wine products of the Mornington Peninsula as a collective i.e. Grown on the Mornington Peninsula; and
- Paddock to plate local distribution mechanisms to reduce food miles, enhance promotion of local products and reduce business costs.

Table 12 summarises some immediate opportunities that could be pursued through collaborative partnerships with regional agribusiness stakeholders to address specific agricultural development projects.

The support for enhancing agri-tourism opportunities in the region aligns with the following recommendations of the Inquiry into Sustainable Development of Agribusiness in Outer Suburban Melbourne:

- **Recommendation 26** - That the DPI partner relevant stakeholders to develop a strategy to address perceptions of peri-urban agriculture, including publicity and education campaigns explaining the link between farming and fresh, local and healthy food.

- **Recommendation 67** - That Tourism Victoria provide funding, through peak bodies, local government or community organisations for agri-tourism training programs in peri-urban Melbourne.

- **Recommendation 68** - That the Vic government introduce greater flexibility into the Victorian planning provisions to promote the development of agri-tourism in the green wedge.
<table>
<thead>
<tr>
<th>Product</th>
<th>Opportunities</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wine grapes</td>
<td>Potential to increase in terms of growing, production, retailing and exporting</td>
<td>Engage with MPVA to explore further development of the wine industry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Explore options to integrate the Cool Climate Wine Show with Tasmania and New Zealand</td>
</tr>
<tr>
<td>Horticulture</td>
<td>Evaluation of potential for increased horticulture</td>
<td>Soil land assessments to identify potential for expansion</td>
</tr>
<tr>
<td>Beef cattle</td>
<td>Farm stays</td>
<td>Identify beef producers that are interested in exploring options for developing a local MP beef brand</td>
</tr>
<tr>
<td></td>
<td>MP Beef brand</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>Strengthen the educational focus with primary / secondary school children</td>
<td>Exploring educational options – support where possible</td>
</tr>
<tr>
<td>Hay</td>
<td>Strengthen supply links with the local regional equine industry</td>
<td>Assess hay quality standards and identify varieties that may be better suited to meeting quality and lucrative market standards</td>
</tr>
<tr>
<td>Broilers</td>
<td>Region has potential to be promoted as home of the Free range chicken</td>
<td>Local councils – flexibility of the broiler code to allow for expansion or redesigning of existing sheds to encourage a shift to free range to meet existing and future demand for this product</td>
</tr>
<tr>
<td>Apples</td>
<td>New technology has the potential to double yields</td>
<td>Link in with MP Fruit growers to establish a better understanding of the industry and development opportunities</td>
</tr>
<tr>
<td></td>
<td>U Pick – is this an option?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Farm gate sales – increase!</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Promotion of MP branded apples</td>
<td></td>
</tr>
<tr>
<td>Cherries</td>
<td>U Pick – link to agri-food trail increase awareness of seasonal window</td>
<td>Establish contact with the farms and look at U Pick model in more detail to</td>
</tr>
<tr>
<td>Vegetables</td>
<td>Farm gate</td>
<td>Link with Vegetables Growers Association Victoria to identify collaborative partnerships for awareness raising and linking producers to consumers and retailers</td>
</tr>
<tr>
<td></td>
<td>Farmers market</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MP fresh produce – awareness</td>
<td></td>
</tr>
<tr>
<td>Avocados</td>
<td>Farm gate sales</td>
<td>Link with the local avocado consultant and farm manager to assess agri-tourism opportunities</td>
</tr>
<tr>
<td></td>
<td>Plantation tour / processing plant</td>
<td></td>
</tr>
<tr>
<td>Olives</td>
<td>Visit olive groves to participate in U pick</td>
<td>Link with the MPOA to identify collaborative partnerships to raise awareness and promote opportunities through shire networks</td>
</tr>
<tr>
<td>Alpaca</td>
<td>Link in to support National Alpaca Week – open farms across the region which could be promoted</td>
<td>Establish stronger links with the MPAB to support industry promotion</td>
</tr>
<tr>
<td>Sheep</td>
<td>MP branded lamb?</td>
<td>Explore opportunities for niche marketing especially meat products</td>
</tr>
<tr>
<td>Organic produce</td>
<td>Demand for local organic produce is increasing</td>
<td>Establish contact with local organic growers to review industry expansion opportunities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Promote local organic production with retail sector Kitchen / garden schemes – U pick, U cook</td>
</tr>
</tbody>
</table>
EXTENSION AND CAPACITY BUILDING

There is a great opportunity for the Shire to facilitate the promotion of best practice in land management across the region. Implementing a rural extension and capacity building program would be of benefit to the whole region. There is a huge population of small landholders, including many absentee landholders, who are responsible for basic landscape management on their holdings but whose knowledge of agricultural and natural resource management concepts is limited.

Engaging the community to undertake basic training on many facets of land management would benefit the wider landscape with weed and pest incursions minimised, water quality better understood and used accordingly, soil, vegetation and pasture management strategies linked to whole of catchment health and general knowledge and skill building to improve production system outputs. This process may also identify local rural skill deficits and link to relevant training courses that promote employment pathways in the agricultural sector.

The support for capacity building within the peri-urban regions aligns with the following recommendations of the Inquiry into Sustainable Development of Agribusiness in Outer Suburban Melbourne:

- **Recommendation 17** - That the Victorian government commit to providing continued support for the work of agribusiness forums in peri-urban Melbourne through the provision of advice, funding and other forms of assistance.
- **Recommendation 28** - The Victorian Government, in conjunction with the VFF, industry bodies and interface local governments, provide direct assistance to agribusiness to implement best practice farming methods which minimise off-farm impacts on neighbouring properties.
- **Recommendation 33** - The Grow west model of pest and weed control be studied and expanded, where appropriate, into other areas of the Port Phillip and Westernport catchment (strengthen engagement with the CMA for regional activities- seems limited at the moment)
- **Recommendation 34** - Where stray dogs are caught on farms, the DPI and local councils can actively enforce the strongest penalties for dog owners and organise compensation to be paid for livestock damage – this has impacted on people willing to produce fat lambs and have sheep enterprises in general in the region

FODDER PRODUCTION

The GIS Maps indicated a substantial amount of hay production occurring across the region. There is a great opportunity to establish contact with the local equine industry and investigate the potential for high quality, locally produced fodder demand by the lucrative racehorse industry. At present, feedback suggests the quality of fodder produced in the region is of a low standard containing poor quality pasture species and weeds. Paddock assessments to identifying plant species and strategies to improve quality for greater digestibility and energy requirements will identify technical agronomy details that need attention and knowledge support to adopt new practices.
**AQUACULTURE**

The shire has a limited connection to regional seafood production in large quantities. There are new aquaculture leases coming on line but there seems to be a gap between the amount of coastline and availability of local fresh seafood and a lack of connection between seafood and a regional flavour or experience. There is some production but this is limited to a few leases on Port Phillip and Western Port bay. There is an opportunity to investigate the potential yield increases and local availability of fresh seafood to strengthen its connect into the region’s food, wine and tourism networks. The Martha Cove precinct has berthing facilities approved for future use by fishing vessels to distribute local seafood directly to the public. It is also conveniently located close to the Dromana industrial estate for potential processing or value adding of product.

**FUNDING OPPORTUNITIES**

The region has been limited in its capacity to attract research and development levy funding for technical on-ground projects or extension and capacity building. There is a general lack of awareness on many levels as to what agricultural production actually occurs in the region. Regional investment in rural support programs is critical to foster confidence that the value of the agricultural sector is of the utmost strategic importance for maintaining a vibrant resilient landscape.

The baseline data generated through this audit has identified specific production and quality capabilities. This updated knowledge will enable many opportunities to engage with key funding stakeholders to leverage dollars and support the implementation of projects that have been identified through the audit. Key funding bodies where partnership building could occur include:

- Rural R&D Corporations (RIRDC, MLA, HAL, GWRDC, AUS VEG);
- Department of Primary Industries, Vic & Regional Development Victoria;
- Vic Health / Education & Planning and Community Development;
- Port Phillip and Westernport Catchment Management Authority;
- Land Care / Sustainability Victoria;
- Department of Sustainability and Environment;
- Department of Agriculture Forestry and Fisheries; and
- Other targeted bodies where a specific need is identified.

The Mornington Peninsula Shire does not exhibit the traits of a traditional broad acre agricultural region. There is a strong perception of it as a lifestyle / hobby / vacation location rather than a rural region focussed on large scale commercial production. It has been overlooked in terms of its current and future productive importance by many sectors. At the same time it has been identified as an important peri-urban zone on the edge of Melbourne that has the capacity to supply key markets with a consistent supply of high quality fresh produce. Relevant recommendations these opportunities link to are:

- **Recommendation 20** - That all land outside the urban growth boundary becomes eligible for rural grants
- **Recommendation 16** - That the Victorian government determine a funding model which ensures all interface councils employ, or have access to agribusiness officers
- **Recommendation 47** - That the Victorian government recognise that the interface is a unique planning area requiring specific planning policies, resources and skills
Conclusion

The region has the capacity to obtain high yielding quantities of product and achieve very high quality. However the amount of production is limited by such factors as land parcel size, soil type, water access, seasonality constraints (temp, rainfall, wind) and economic pressures on production margins.

Agribusiness provides the foundation for sustainable land management practices and provides the opportunities for value adding industries to operate in conjunction with agricultural activities, thereby further diversifying the economic base of the region.

By starting to address productivity and profitability constraints in the short to medium term, there will be an opportunity to offset some expectations that all future land use potential can only be linked to sub division and/or hobby pursuits.

Raising targeted awareness of the critical importance of peri-urban agricultural systems is a great opportunity for this region to place a higher value on the productive worth of the regions soils and landscape. The capacity for high yielding quality production can now be quantified more accurately with baseline information collected by the audit. Implementing a range of agricultural on ground activities will build capacity in landowners to identify how best to attain the scale to which they would like to manage their production system.

References


Mornington Peninsula Shire (2009) “Shaping our Future – One step at a time.” Mornington Peninsula Shire Strategic Plan


Sargeant I, (2003). Soil and landforms of the Mornington Peninsula. Department of Primary Industries, Victoria
**RELEVANT WEB SITES**

Mornington Peninsula Shire  

Mornington Peninsula Gourmet  

Mornington Peninsula Olive Association  

Mornington Peninsula Alpaca Breeders  

Vegetables Growers Association  
[www.vgavic.org.au](http://www.vgavic.org.au)

Department of Primary Industries, Vic  

Department of Sustainability and Environment  

Port Phillip and Western Port Catchment Management Authority  

South East Councils Climate Change Alliance  

Rural Industries Research and Development Corporation  

Natural Resource Management Regions  

**RELEVANT READING**

2. Understanding Rural Victoria. Barr N
3. Drivers of Land Use Change. This is a series of papers produced in conjunction with Department of Sustainability and Environment. The main authors are Quentin Farmar-Bowers (RMIT), Jim Crosthwaite (DSE), Julia Callaghan (DSE), Carole Hollier (DPI), Andrew Straker (DSE).
APPENDICES

APPENDIX A: SHIRE FARM LAND RATE QUALIFICATION

To qualify for the Shire Farm land rate the following criteria must be met according to the Valuation of Land Act 1960 – Section 2(1):

“Farm land” means any rateable land:

(a) that is not less than 2 hectares in area;

(b) is used primarily for grazing (including agistment), dairying, pig-farming, poultry-farming, fish-farming, tree-farming, bee-keeping, viticulture, horticulture, fruit-growing or the growing of crops of any kind or for any combination of those activities; and

(c) that is used by a business

(i) that has a significant and substantial commercial purpose or character;

(ii) that seeks to make a profit on a continuous or repetitive basis from its activities on the land; and

(iii) that is making a profit from its activities on the land, or that has a reasonable prospect of making a profit from its activities on the land if it continues to operate in the way it is operating
APPENDIX B: AGRICULTURAL PRODUCTION IN THE MORNINGTON PENINSULA SHIRE, SURVEY

Postcode

1. **What agricultural production do you currently undertake on your property?**
   Please include where possible the following information - total area of enterprise (ha), tonnage grown, quality standards - industry grading criteria, etc

<table>
<thead>
<tr>
<th>Product type</th>
<th>Area (ha)</th>
<th>Yield (t/ha)</th>
<th>Quality specs</th>
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2. **What method best describes how and where your produce gets sold?**
   Please include descriptions of sale end points for product (e.g. Farmer market, IGA) or appropriate box(s) to indicate generally product distribution channels

<table>
<thead>
<tr>
<th>Product type</th>
<th>Local</th>
<th>Metro</th>
<th>Regional</th>
<th>Interstate</th>
<th>Export</th>
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3. **Are you intending to increase your production or diversify your business in the future? If so, how?**

_________________________________________________________________________________________________________________________________
_________________________________________________________________________________________________________________________________
_________________________________________________________________________________________________________________________________
_________________________________________________________________________________________________________________________________
_________________________________________________________________________________________________________________________________

4. **What opportunities do you think exist for agriculture and value added food production on the Mornington Peninsula?**

_________________________________________________________________________________________________________________________________
5. Are you a member of any local industry associations?  Yes / No
   If so – please highlight

6. How do you access new research / technology for your enterprise?
e.g. Internet, industry networks, newsletters, field days

7. Is there any other general information regarding agricultural production you may like to include in your input?

Would you like to be kept informed of any rural industry activities in the Mornington Peninsula Shire?

If so, add your contact details in the box below.

Please return in the REPLY PAID envelope by JUNE 30th 2010

THANK – YOU for taking the time to complete this survey and helping us to better understand agricultural production systems on the Mornington Peninsula.

Gillian Stewart
Rural Business Officer
Mornington Peninsula Shire
gillian.stewart@mornpen.vic.gov.au or phone 03 5950 1833
APPENDIX C: ACCESSING LOCAL PRODUCE ACROSS THE MORNINGTON PENINSULA SHIRE, SURVEY

Business name_________________________________________________
Postcode________________________

1. What local produce (fresh or packaged) do you currently have access to from within Mornington Peninsula Shire?

<table>
<thead>
<tr>
<th>Product type</th>
<th>Use</th>
<th>Quality / seasonality</th>
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<tbody>
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2. What method best describes how you access local produce for your business?

Please include descriptions of purchase points for product (e.g. Farmer market, IGA) or appropriate box(s) to indicate general product purchasing channels

<table>
<thead>
<tr>
<th>Product type</th>
<th>Supermarket</th>
<th>Farmers market</th>
<th>Direct purchase</th>
<th>Wholesale</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g. vegetables</td>
<td>e.g. IGA</td>
<td>e.g. Red Hill</td>
<td>from grower</td>
<td>e.g. Melb market</td>
<td>Web / mail order</td>
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3. Would you like to be able to purchase more local produce to use in your business? If so, please indicate your requirements or fill out table with detail

<table>
<thead>
<tr>
<th>Product type</th>
<th>Quantity (amount in order)</th>
<th>Frequency (eg. all year, seasonal)</th>
<th>Buying outlet (e.g. Direct purchase, Supermarket etc)</th>
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</table>
4. What opportunities do you think exist for strengthening the networks between agricultural production and food business's across the Mornington Peninsula?


5. Are you a member of any local food industry association or network? **Yes** / **No** If so – please specify


6. How do you maintain your awareness of opportunities to access fresh / packaged produce for your business? e.g. Internet, industry networks


7. Is there any other general information regarding local food production networks you may like to include in your input?


Please return in the REPLY PAID envelope by **July 9th 2010**

**THANK – YOU** for taking the time to complete this survey and helping us to better understand agricultural production systems on the Mornington Peninsula.

Gillian Stewart
Rural Business Officer, Mornington Peninsula Shire
gillian.stewart@mornpen.vic.gov.au or phone 03 5950 1833
APPENDIX D: SOIL / LANDFORM MAPPING, MORNINGTON PENINSULA SHIRE

Soil/Landform Mapping
Mornington Peninsula Shire
1:100,000 soil/landform mapping by Ian Sargeant.
For further information visit Victoria Resource Online (www.rli.vic.gov.au/rli)

Legend:

- **Soil Types**:
  - Type A: Rolling low hills
  - Type B: Cretaceous
  - Type C: Cretaceous
  - Type D: Cretaceous
  - Type E: Dune sand
  - Type F: Alluvial plain
  - Type G: Beach
  - Type H: Flinders
  - Type I: Marnies
  - Type J: Longwaver
  - Type K: Marnies
  - Type L: Alluvial plain
  - Type M: Peat
  - Type N: Drainage line
  - Type O: Swamp

- **Geology**:
  - Early Tertiary sediments
  - Devonian granite
  - Devonian granite
  - Tertiary sediments
  - Early Pleistocene sediments
  - Late Pleistocene sediments
  - Early Pleistocene sediments
  - Late Pleistocene sediments
  - Alluvial fan
  - Tertiary sands
  - Recent alluvial sediments
  - Quaternary alluvial sediments
  - Quaternary alluvial sediments
  - Quaternary alluvial sediments
  - Recent alluvial deposits
  - Recent alluvial deposits
  - Peat

- **Dominant Soils**:
  - gravel, brown and yellow Chromoxers
  - Yellow and Grey Chromoxers
  - Tamarix with some Yellow and Brown Chromoxers
  - Brown and Yellow Chromoxer with some Sodosols
  - Sands
  - Tamarix
  - Shelly Calcarcous
  - Alluvial
  - Yellow and Grey Sodosols
  - Brown Demossis with some Brown Torriorthens
  - Shelly Calcarcous
  - Grey Demossis
  - Yellow and Brown Chromossis with some Sodosols
  - Yellow and Grey Demossis with some Histic and Aquic Histic
  - Yellow and Grey Sodosols
  - Red Nitisols with Red Demossis
  - Red Nitisols
  - Ferric Regosols
  - Yellow and Grey Chromossis and Sodosols
  - Hydromorphic
  - Extralateral Hydrogans (along coast)
  - Bereabic Podsol (Washed)

- **Complexes (subsoil) complexes**:
  - 9999: Interim with low permeability
  - 999: Livestock
  - 9999: Bittern with Longwaver
  - 9999: Longwaver with Bittern
  - 9999: Flooded with swamp
  - 9999: Tamarix

- **Other units**:
  - 9999: Aridus, Flinders with Flinders clay
  - 9999: Flinders and Flinders clay
  - 9999: Flinders and Red Hill
  - 9999: Bittern, sand overlay
  - 9999: Bittern with Bittern sandy loam
  - 9999: Longwaver, sand overlay
  - 9999: Longwaver, sand overlay
  - 9999: Marnies, clay

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