

MORNINGTON PENINSULA SHIRE AGRICULTURAL ANALYSIS 2014



Gillian Stewart
Rural Business Officer
Economic Development Unit

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Project management, content and editing:

Gillian Stewart, Rural Business Officer, **Mornington Peninsula Shire**

Technical content:

David Stewart, Principle Livestock Consultant, **Small Farm Services Victoria**

Brian Hussey, **Horticultural Consultant – Food Crops**

Data entry:

Nicole White, Wal Morrison Trainee, **Mornington Peninsula Shire**

Tamsin Newport, Wal Morrison Trainee, **Mornington Peninsula Shire**



Executive Summary

Agricultural production across the Mornington Peninsula Shire remains rich in diversity, scale and production capacity. Favourable climatic conditions underpinned by a range of fertile soils contribute to a unique natural landscape that supports a variety of high quality food and fibre production systems. The estimated regional area for agricultural production that qualifies for the Shire's Farmland (2013/14) rate is approximately 289.55km² (28,995ha) or 40% of the total land mass (720km²).

Significant agricultural industries continue to thrive in the landscape. These include poultry farms, horticultural (fruit, vegetable, salad mix) systems, vineyards, livestock and fibre enterprises; and an expanding diversity of artisan and value-added businesses. The seasonal production diversity is an important risk management strategy for the region. The dynamics of annual production systems buffer impacts of specific climatic events (frost, hail, water logging, disease, crop failure); provide full time employment and ensure secondary and tertiary industries benefit from consistent business (transport, distribution, processing, sales).

The strategic location of many market gardens, on the lower topographic areas of the landscape, ensures minimal frost impacts with full land utilisation and crop rotations across the whole year. 41% of poultry farms supply the local Inghams processing plant which reduces transport costs and animal welfare concerns.

A number of larger horticultural businesses have supply contracts with major food companies including Coles, Woolworths, Aldi, Costco and IGA. Whilst many smaller businesses take advantage of local farmer markets, independent retailers, farmgates and other distribution systems to supply local food and hospitality businesses.

MPS agribusiness opportunities include:

- an expanding wholesale nursery and compost sector;
- potential for an expanded horticultural sector (subject to increased recycled water access);
- potential for increased and diverse seafood and marine production;
- support for expansion of an innovative allied agribusiness sector ;
- protection of Class 1 & 2 soils for long term food production;
- support for U-pick and farmgate capacity building;
- increase in niche food crops and products;
- development of cooperative marketing groups;
- an emerging Agritourism sector based on food, fibre and farming practices; and
- an equine industry expected to rise in value with the planned relocation of a significant thoroughbred business to the region.

The combined value of primary agricultural production with significant processing businesses is estimated in the vicinity of \$1 billion. Local food and fibre production systems remain important economic landuse assets within the Green Wedge Zone. These enterprises contribute significant financial and 'in-kind' benefits to the shire's economy. They generate substantial production,

purchases and sales; provide local employment and training opportunities; and invest in private land management practices that contribute to the public 'vista' benefits.

However, the landscape values cannot be reflected by metrics alone. There are multiple social and environmental benefits that are not easily quantifiable but should be acknowledged as important contributors to a vibrant and thriving peninsula community. In particular, the regions soils must be valued and conserved for their fertility and productive capacity. Matching landuse and landscape capability is essential to protect, preserve and enhance this resource base. The Shire has a pivotal role in nurturing a resilient peri-urban foodbowl that encourages local and seasonal access whilst also supporting regional and urban demands for long term food security.

Table

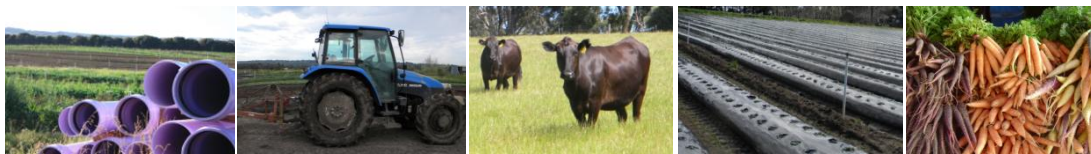
Commodity	Description	Primary Value (\$m)	Processing value (\$m)	
Vegetables	Annual crops	216		
Equine	Breeding, agistment, recreation	142		
Nurseries	Wholesale & retail	125		
Poultry	Meat production and processing, eggs, pullets	90	200	
Grapes	Grape production	8	70	
Salad Mix	Annual salad crops	50		
Allied industries	Seed, fertiliser, machinery, chemicals	43		
Poultry by-products	Deep litter, manure	25		
Livestock	Beef and sheep products	24		
Compost	Plant media	20		
Berries	Strawberries, raspberries, blueberries	20		
Artisan	Nuts, rare fruits, milk, deer, garlic, meats, organic vegetables, farmgate, honey, alpaca, cut flowers, heritage seedlings, meats, truffles, saffron, potatoes, condiments	20	10	
Seafood	Aquaculture, seafood, fishing	13		
Fruit	Apples, pears, olives, avocados, cherries	12		
Forestry	Trees for timber Christmas trees	10		
Hay products		2m		
Total		820m	280m	
Total (combined value)				\$1.1b

Background

In 2010 the Mornington Peninsula Shire (MPS) undertook an Agricultural Audit to develop a better understanding of the scale and diversity of agricultural production systems. The aim of the project was to gather data that would better describe the location, type and size of rural industries that reside within the shire. In addition, it was an important reference point to identify opportunities for agribusiness to obtain greater recognition and support by council.

The Audit provided insight into landuse trends, business types, scales of production and economic contributions to the local economy. A number of Opportunities for Action were identified around the following themes:

1. Bunyip Food Belt – targeting Tyabb Intensive Agricultural Zone (TIAZ)
2. Mornington Peninsula Branded Produce
3. Agri-tourism
4. Extension and capacity building (landholder learning)
5. Aquaculture
6. Equine and Fodder industry (hay & silage)
7. Research & Development Funding



An update on the current status of all these *Opportunities for Action* are provided in Table I. They set the framework and focus for the shire's Rural Business Officer to develop a workplan and engagement strategy with rural landowners. The 2010 Audit has also been important source of evidence to support planning and development of numerous projects including:

- Development of the MPS Local Food Strategy;
- Evidence to support the 'Linking local people to local food' initiative;
- Evidence to support the establishment of the MPS Small Rural Landholder Network;
- Data input into the Peri-urban Agricultural land mapping project;
- Victorian Food Alliance 'Know your food bowl';
- The MPS Equine Industry Audit;
- The MPS Interim Green Wedge Management Plan, Agriculture & Rural Land Management actions; and
- 2014-2017 Economic Development Strategy.

Table 1. Status of Opportunities for Action (2010-2014)

Opportunity	Action	Outcome	Output
1. Bunyip Food Belt – targeting new production zones	Engagement with Tyabb Intensive Agricultural Zone growers to determine actual water needs	Detailed information on TIAZ technical and business needs	Report to the Mornington Peninsula Shire Council for a Stage 2 assessment of recycled water for agriculture in the Somerville – Tyabb area (Ian Geddes 2011)
2. Mornington Peninsula Branded Produce	Industry consultation to determine local Food Industry priority needs	Establishment of a local Food Industry Advisory Body (FIAB)	Local Food Strategy
3. Agri-tourism	Identification of Farmgate opportunities Farmgate mapping exercise Community awareness raising regarding local food / fibre systems	Data input into the Regional Development Australia Agrifood Masterplan Increased awareness of local farmgate businesses, food access and experiential learning	Agrifood Masterplan (2013) Linking local people to local food Farmgate map Know your Food Bowl case studies
4. Extension and capacity building	Rural industry consultation to develop technical learning focus for engagement	Established Small Rural Landholder Network (SRLN) Technical learning activities rolled out in an on-going format	SRLN Email database developed for targeted Stakeholder engagement Landholder learning activities DAFF funding for 'Demonstrating Sustainable Agricultural Practices
5. Aquaculture	Industry situation analysis undertaken	Enhanced awareness of local economic contributions	Aquaculture Industry Audit report
6. Equine and Fodder industry (hay & silage)	Industry consultation to better quantify the local equine sector	An analysis of the MPS Equine sector has provided a more detailed understanding of the local equine economy	Equine Industry Audit report
7. Research & Development Funding	Actively pursued funding opportunities to support the local agricultural industry	Attraction of Federal government funds to support local project initiatives	DEEWR (40k) Caring for Our Country (30k/yr @ 5 yrs)

Purpose

This project aims to update the actual economic value of the agricultural sector as a whole and by market segment (Primary and secondary industry values and interactions). This will assist the Economic Development Unit (EDU) to achieve **Goal 7 Supporting a Sustainable Economy** of the Shire's Strategic Plan, which aims to foster innovative business and promote the rural sector.

Outcome 7.2 *Prosperous rural economy*

- 7.2.1 To foster and encourage agriculture and promote the Peninsula's rural sector.
- 7.2.2 To develop and grow local businesses including agri-tourism and intensive agriculture.
- 7.2.3 To support rural business through networking and industry development.

This project undertakes a mapping and analysis of this sector to:

- Identify stakeholders, industry growth, economic, environmental, social deficits / strengths in the sector, quantitative analysis (\$) of the industry to:
 - Quantify whole of sector and sub components;
 - Identify future knowledge, skills and employment needs for the industry; and
 - Trends in production and local economic contributions.



Regional profile

Location

The Mornington Peninsula Shire (Figure 2) is located on the south eastern tip of Port Phillip and Westernport. 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. In 2002, the United Nations proclaimed the Western Port region in Victoria, Australia, a UNESCO biosphere reserve. Western Port was chosen because it has outstanding natural values, including a Ramsar wetland of international importance, on the fringe of the expanding city of Melbourne.

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 has 190 km of coastline which accounts for about 10% of Victoria's overall ocean border. The region is the traditional home of the Boonwurrung / Bunurong, members of the Kulin nation, who have traditional connections & responsibilities to the Mornington Peninsula.



Figure 1a: The Mornington Peninsula Shire – Township boundaries



Figure 1b: Biosphere region

Landscape analysis

At the time of the Audit's compilation the Mornington Peninsula landscape characteristics were described as follows:

“Agricultural production across the Mornington Peninsula Shire is rich in diversity and production scale; reflective of the nature of the regions seasonal traits. The area for agricultural production was approximately 24000 ha or 240km² which is about 33% of the total land mass (720km²).

The Port Phillip and Westernport region, 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. Mornington Peninsula makes a significant contribution to this annual production figure with current estimated values of gross agricultural production of approximately \$450m. “

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

It was noted the region has capacity to obtain high yielding quantities of product and 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.**

Significant agricultural industries are contained in these landscapes including broiler farms, wine, fruit and vegetables, broadacre meat and fibre enterprises and an expanding diversity of artisan and value added businesses. All capitalise on production capacity in this maritime zone, with access to highly fertile and productive soils, year round recycled water at Boneo, favourable climatic conditions and short supply chain access.



Strategic landuse context

The Mornington Peninsula Shire is a composite mixture of urban settlements and rural landscapes. It consists of a conventional green wedge extending from the Urban Growth Boundary (UGB) intersecting highly fertile agricultural farmland, primary and secondary industries, functional ecosystems and diverse community demographic structures. The Green Wedge is an important landscape feature providing numerous benefits including:

- opportunities for a diverse range of agricultural uses;
- protection of rural and high amenity landscapes;
- preservation of conservation areas close to where people live;
- protection of renewable and non-renewable resources and natural areas; and
- the development of networks of open space.

Critical natural resources such as soil, water and biodiversity can also be compromised due to irreversible shifts in land use function, Challenges found within a peri-urban landscape that need to be managed accordingly include:

- The 'rapid changes in land-use' that leads to potential displacement of productive farmland towards rural living and hobby enterprises;
- 'Conflicts between new and existing landholders' especially where agricultural production is being undertaken and 'right to farm' is challenged; and
- 'Degradation of natural resources and biodiversity or threats to urban food security through loss of agricultural land'.

The economic viability of the majority of rural holdings is limited due to size, however collectively there are significant tracts of highly fertile land needing to be managed for wider sustainable community benefits. Planning for the future needs of the community is critical, especially around issues of climate change, retention of local food systems, minimising pollution, provision of green open space and nurturing health and well being for residents and visitors. Individual landholders have an important role to play in terms of their collective contribution to 'catchment scale' sustainable land management.



Landuse function

Shire Farmland Rate statistics

According to the 2013 Shire's Farmland Rate database, there are currently 1175 land parcels receiving this differential rate. Qualification for any property to be rated using the Mornington Peninsula Agricultural Rate requires that the property must firstly be classified as "farm land" in accordance with the provisions of the Valuation of Land Act 1960.

The key enterprise themes (Figure 2) attributed to land parcel types are:

**Mixed Farms, Livestock, Orchards, Market Gardens, Plant Nurseries,
Poultry, Equine, Vineyards, Rural Vacancy, Forestry**

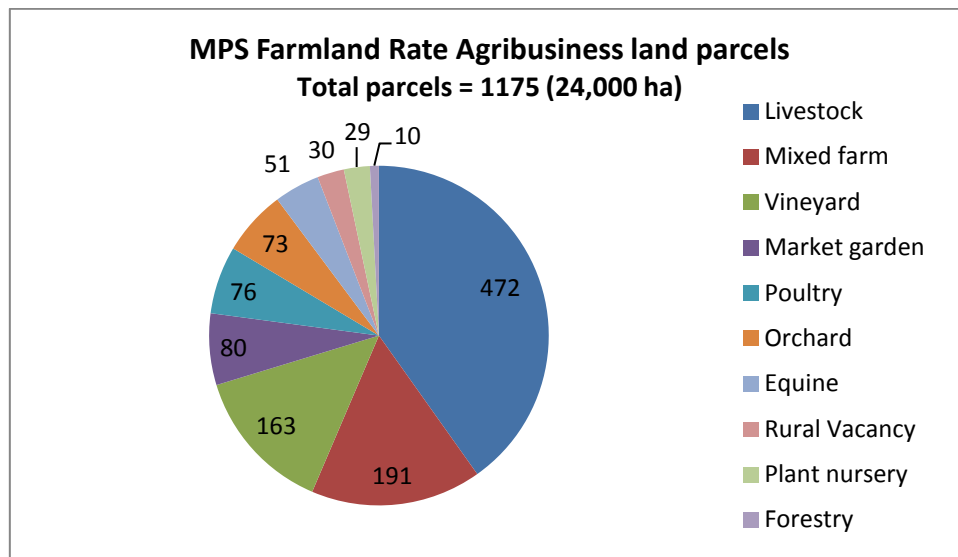


Figure 2. Summary of 2013 Farm land rate recipients

In 2010 there were 1289 parcels of land that qualified from Farmland Rate encompassing 23,900ha of area. Currently, there are 1175 parcels qualifying for the discount rate and represents 28,955ha of agricultural related activity. Comparatively, there has been a 9% reduction in FLR parcels that qualify but an increase in land area of 5055ha.



Farmland Rates	Enterprise type	No. of parcels	Total enterprise area (ha)
	Forestry <i>Fruits, Nuts, Mulch, Crafts, Furniture</i>	10	145
	Plant Nursery <i>Native plants, cut flowers, Christmas trees.</i>	29	186
	Rural Vacancy <i>Agricultural production (no house on lot)</i>	30	383
	Equine <i>Breeding, agistment, recreation, agritourism</i>	51	2,276
	Orchard <i>Fruits, (apples, cherries, peaches, plums)Cider, juice, oil</i>	73	686
	Poultry <i>Eggs, free range option, chicken</i>	76	630
	Market Garden <i>Vegetables e.g. carrots, parsnips, avocados) salad variety's, fruits (strawberries, apples)</i>	80	1,595
	Mixed Farm <i>Meat, wool, dairy (milk, cheese), leather, hay, lucerne wheat, honey</i>	191	4,604
	Vineyard <i>Grapes e.g. chardonnay, pinot gris, pinot noir.</i>	163	1105 vines (ha) 2200 (total land ha)
	Livestock <i>Meat (beef), wool</i>	472	16,250
	Total parcels	1175	28,955ha

Land Classes

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.

There are seven principal soil mapping units that provide the majority of fertile ground suitable for agricultural production. The characteristics of these soil types link strongly to specific production systems and enable productive capacity and quality to be maximised; 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).

Additional information regarding soils and landclasses has been obtained since the 2010 Audit to add value to the understanding of landscape / resource condition interactions. The MPS was involved in a soil mapping study that generated localised maps and data to improve understanding of land capability for agriculture; and initiate a system for consistent use of this information. It is intended to guide stakeholders and decision-makers to identify where soils can be preserved, protected or enhanced where high quality agricultural land for food production has been identified through a Fact Sheets series.

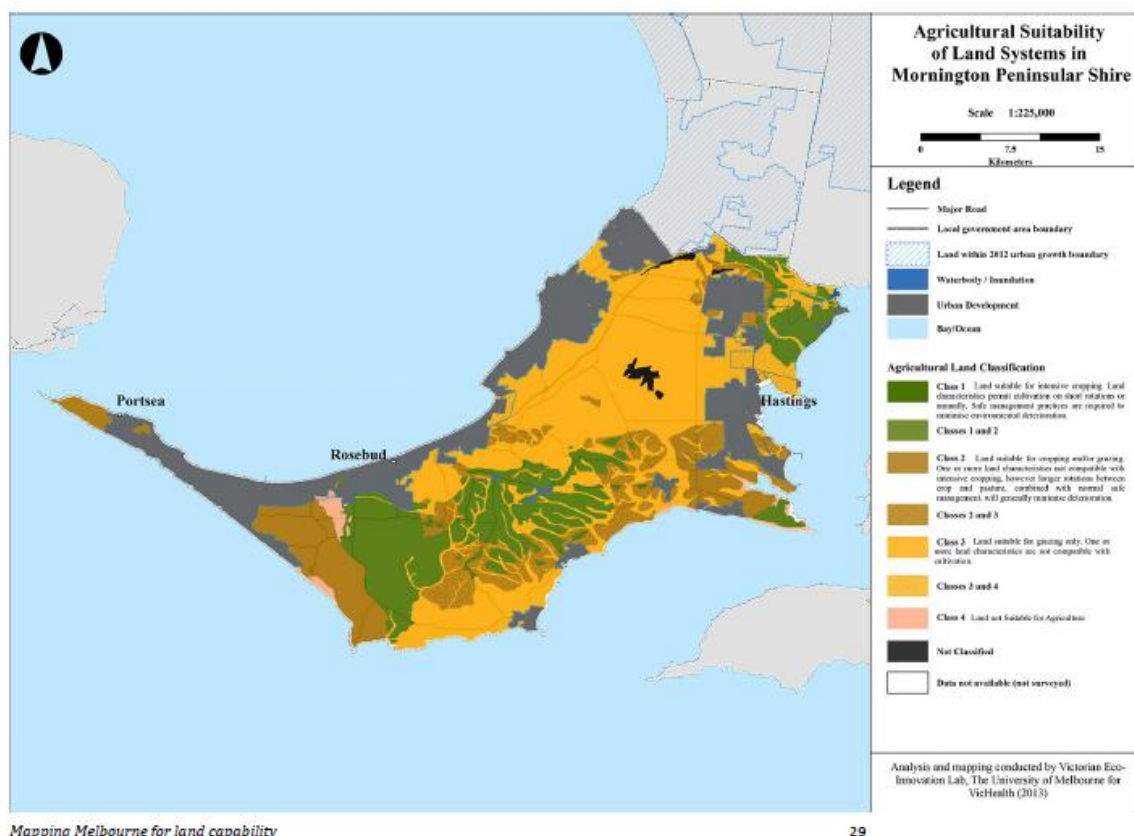


Figure 3. Agricultural Sustainability of Land Systems in the Mornington Peninsula Shire

Summary of landscape / soil analysis

The data generated from this landscape analysis identifies and quantifies the soil mapping classes more specifically across the shire. A summary of the land system class ranks is as follows:

- Class 3 land systems make up the 61% of Mornington Peninsula or approximately 44,000 hectares;
- Class 1 land systems are the next most widespread (15,000 hectares or 21%);
- Class 2 land systems cover 11,000 hectares (16%);
- Class 4 covering 1000 hectares (2%);
- Class 1 and 2 lands lie across much of the southern and central areas of the Shire, including approximately 1300 hectares within the UGB near Hastings that has not been intensely developed for urban use.

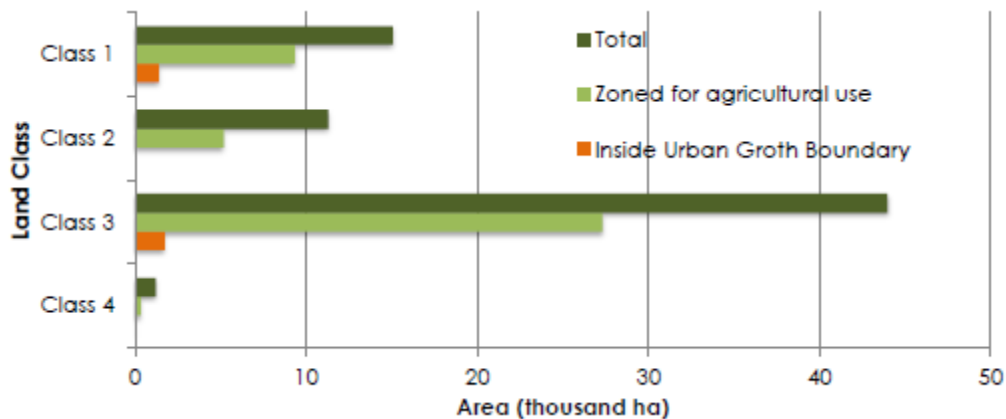


Figure 4. Summary of Land class areas (ha) within the Mornington Peninsula Shire.

This information provides an essential reference point to support future landuse planning across the shire. Understanding the properties of the diverse soil types will enable the enhanced matching of landuse to landscape capability; preserving and protecting these valuable assets for long term food and fibre production.



Horticulture industry

Vegetables

The vegetable industry on the Peninsula is the dominant horticultural sector with considerable investment over recent years and major commercial operators marketing produce throughout the year to Melbourne and interstate. The information collected for this report is a combination of data from the most recent ABS census (2010-2011) and industry sources.

The soils and frost free climate make this region particularly well suited to growing a wide range of annual vegetable crops including brassicas (broccoli, cabbages, cauliflowers) and chinese vegetables (bok choy, pak choy and wongbok). Leafy vegetables including numerous lettuce varieties and a combination of salad mix crops including mesclun, chard and mizuna show great potential as high value crops. Other traditional vegetables such as carrots, parsley, celery and potatoes are also well suited to this area. Overall, the diversity of vegetable production systems across the shire is enormous and growing conditions ensure land can be utilised all year round.

In most cases soils are being continuously cropped with rotations and crop selections dictated by prevailing market forces and the specialist skills of growers. ABS statistics indicate there are 38 different producers farming 1852 hectares of land in the Shire and this area is likely to have grown to 1900 hectares since the 2011 census. Two of the larger producers hold approximately 400 hectares each and account for approximately 800 hectares of overall 1852 hectare figure.

The very high gross returns for this industry per hectare stand in contrast to other perennial horticultural crops such as vines and stone fruit however the high input costs mean the level of profitability is always at risk from fluctuating market forces and extreme weather events. It is not possible to give an actual profile of the gross margins for vegetable production on the Peninsula without financial information from growers but an indicative figure can be provided based on the major crops grown.



These returns per hectare are based on the growing time for any of these crops which will vary depending on the crop and time of year. It could be expected that on a continual cropping system there can be 3-5 crops grown in a year with varying rotations and allowing for harvest times and bed preparations between crops.

Crop	Yield/ha	Price/tonne	Costs/tonne	Gross Return	Total Variable Costs	Gross Margin/ha
Lettuce	22 tonne	\$1200	\$1000	\$26400	\$22000	\$4400
Cauliflower	22 tonne	\$750	\$650	\$16500	\$14300	\$2200
Broccoli	7 tonne	\$1500	\$1350	\$10500	\$9400	\$1100
Carrots	55 tonne	\$450	\$300	\$24750	\$16500	\$8250
Celery	50 tonne	\$800	\$650	\$40000	\$32500	\$7500
			Totals	\$118150	\$94700	\$23450

Using the total of the gross returns as an indicator of possible gross income for these typical crops an approximation of the gross returns per year for vegetable growing per hectare would be around **\$120,000** per annum.

Taking into account total variable cost of **\$94,700** per hectare to arrive at a total gross margin of **\$23,450** per hectare we could estimate that over a five crop rotation there would be an approximate overall gross margin of **\$20,000** per annum. It's important to note that gross margins only take into account variable costs and don't include fixed and capital costs. However, the diversity of vegetable types is an effective risk management tool to manage the impact of seasonal conditions and market prices (Source. Stewart, D (2014) & Hussey, B (2014).



Salad Mix Vegetables

Salad mix vegetables in recent years have emerged as the high return crop of the vegetable industry. Hussey and Company at Tyabb have been a long standing success story in this industry producing a wide range of leafy crops for local and overseas markets.

More recently salad mixes have also become a primary production of Coolibah Herbs who have recently expanded their operations to a block at Moorooduc.

Hussey & Co have been at the forefront of export marketing innovation and also the engineering design of automated sowing and harvesting systems which have substantially reduced the typically high labour requirements normally associated with vegetable growing.



Harvested crop yields of 3kg per linear meter of raised bed can return a wholesale price of \$5.00/kg or about five times the price of lettuce head products providing potential returns per hectare in excess of \$500,000 per annum.

The success of the salad mix concept is in the convenience of purchasers being able to buy a variety of different crops in washed and pre-packed form ready for consumption. The evidence is clear on the retail shelves of supermarkets where these packets and loose self-serve mixes are increasingly taking up shelf space

Because consumers are only purchasing small quantities to meet their immediate needs they are prepared to pay the \$30/kg retail price. This is an excellent example of value added marketing through convenient packaging to meet customer demands but also providing substantial rewards for the producers. Source: Stewart, D (2014).

serifon mizuna
komatsuna redmustard
lamb's lettuce lupin frizé
baby spinach baby radicchio
roquette baby beet mibuna
chicory snowpea endive
tatsoi dunpea lettuce

Industry issues

The constant challenge for intensive horticulture is effective pest management to grow the quality of crops demanded by consumers. For example leafy vegetable crops such as lettuce have insect pests such as thrips and aphid as well as a number of diseases including *sclerotinia*.

The adoption of integrated pest management techniques including pheromones and a much better understanding of the role of beneficial predatory insects has significantly reduced the need for pesticides in horticulture. The continuous cropping systems over time also has the effect of exhausting weed seed populations and hence herbicide use can be reduced

The ongoing efficacy of existing pesticides relies heavily on their correct application and resistance to these products can occur sooner through poor usage practices.

This issue of pesticide resistance is risk management issue for all agricultural and horticultural industries, but the risk particularly applies to areas of intensive production.

Values of production

A figure for the annual production of vegetable industry in the Shire based on the ABS area under crop needs to take into account the growth in importance of the salad mix industry. It is important to note that any figure will be indicative rather than actual as the vegetable growing industry on the Peninsula is dynamic because of the influence of market price variations, weather conditions and the enterprise decisions of individual growers. Assuming a total growing area of 1900 hectares of which salad mix vegetables may account for up to 100 hectares the table below provides an estimate of the total gross returns for this major industry on the Peninsula.

Table . Summary of vegetable and salad mix area and \$ returns

	Area Cropped	Gross Return/ha	Total Gross Return
Vegetables	1800 ha	\$120,000	\$216m
Salad Mix	100 ha	\$500,000	\$50m
Total			\$266m

Allied industries

The local primary production sector is supported by a number of allied industries that provide specific goods and services to agribusinesses. Machinery fabrication and sales, seedlings, fertiliser, chemicals, waste removal and poultry deep litter recycling are an important secondary level of support to agriculture. The value of the allied industries can be delinked as follows:

Value of Allied Industries

Machinery:

- Approximately \$8,000,000 to \$12,000,000
- Number of people employed approx. 25

Seed, fertiliser, chemicals:

- Approximately \$6,000,000 of sales;
- It is noteworthy that this Allied Industry represents between 8% - 10% of total production costs. (Spinach and Baby Spinach constitute by far the largest seed sold); and
- Approximately 25 people are employed in this area.

Poultry or Deep Litter Manure:

- Four accredited and H.A.C.C.P. audited contractors
- Total turn over \$25,000,000
- Approximately 30 people employed

Source: Hussey, B (2014)

Industry summary

It is important to recognise that some of our Peninsula vegetable farms are being operated by the second and third generations of the same families. They are, in fact, 'dynasty farms'. Some of the younger managers have studied (or are studying) Agricultural Science, Agronomy and other economic and management courses. These successive generations through higher education will take the industry into the more sophisticated market and economic environment of the future.

It is also important to recognise that Peninsula based vegetable growing farms form a critical part of a very useful economic and environmentally sound cycle. This includes water from the South Eastern Purification Plant (@ \$300-00 per mg/ltr) which would otherwise be wasted and organic fertiliser in the form of deep litter manure from the poultry sheds.

Peninsula-based vegetable producing farms operate through world's best practice of integrated pest management and all round hygiene. All operate under demanding Quality Assurance regimes such as S.Q.F. 2000 and H.A.C.C.P.

Finally, any estimate of the value of Peninsula-based vegetable farms and the dollars they produce must take into account any additional land they may own and operate elsewhere. It is not uncommon for Peninsula farms to have land in areas such as Mildura and Wemen which may supplement the Peninsula farm during the colder months.

Nursery Industry

This is a growth industry on the Peninsula where water security, ideal growing conditions and a large Melbourne market makes it an attractive location for wholesale and retail producers. The industry is worth approximately \$105m to the Peninsula economy with a further \$20m of activity in the growing media (composting) industry. The Nursery and Garden Industry of Victoria (NGIV) members on the Peninsula represent about a third of the industry. Their members employ about 500 people and the entire industry employs more than a 1000 people. Source NGIV (2014).



Perennial Horticulture

Perennial Horticulture on the Peninsula is dominated by pomme fruit production which is comprised of 98% apples and 2% pears. However there is a diverse range of other perennial crops contributing to local food production. The table below provides an indication of production levels of the major fruit crops from the 2011 ABS figures.

Crop	Number of growers	Trees < 6 years old	Trees > 6 years old	Total number trees	Yield /tree kg	Annual Production kg	Annual Value Production \$
Apples	24	24,854	104,775	129,629	29	3,067,310	6,000,000
Olives				250000	5		2060000
Cherries	12	2,319	11,860	14,179	10*	140,000	1,400,000
Pears	11	102	1771	1843	35	64,700	130,000
Avocados	10			6000		10,000 trays	500,000

***Revised figure based on grower discussions**

It's worth noting that with both apple and cherry producers approximately 20% of trees are new plantings reflecting a level of stable optimism from growers for their industry.

Cherries

This relatively small industry deserves some analysis based on potential high returns per hectare and possible application to smaller holdings capable of developing a small orchard to meet the growing demand for the U Pick market. Growers indicate that they can sell as much as they can grow during the summer harvest period. Red fruit of any type is sort after by the many people from the Asian community and that time of the year as culturally, red is a favoured colour for special occasions.

Returns per tree for cherries can be many times that of other fruit once trees reach maturity. Because cherries are an early season crop most of the U Pick harvest would be complete early in January whereas the apple harvest is not until the autumn months.

This means most of the cherries are off the trees before the worst of the summer heat and subsequently means less of an emphasis on irrigation capacity and requirements. With low density plantings and modern water conservation techniques, there is good potential to grow cherries without irrigation. This has previously been successfully done on the highly productive soils and reliable rainfall areas of Main Ridge and Red Hill.



The U pick market will always be attracted to large cherries and so tree management needs to focus on producing fruit of medium to large size to optimise returns per tree. The most significant cost with establishment apart from the trees would be bird netting as small birds represent a major threat to fruit leading up to harvest. Rain and hail also can also lead to damaged fruit, however by growing a range of varieties which stagger the harvest period over a number of weeks this risk can be mitigated. The table below provides some indication of potential yields and gross returns for U-Pick Cherries

	Small-medium trees	Medium size trees	Medium-large trees
Yield per tree kg	5.0	10.0	15.0
Gross returns/tree @ \$10.00/kg	\$50.00	\$100.00	\$150.00
Gross return/ha Low density 500 trees/ha	\$25,000	\$50,000	\$150,000

The advantage of U Pick for cherries is the elimination of the expensive need for harvest labour which commercial producers incur and there is also no need for cool storage as customers take away their purchase. Clearly there are economies of scale issues for new smaller growers to consider but these could be overcome using similar systems of contractor services to those used by smaller vineyards. Significantly the gross margins for cherry production vastly exceed those of the well-established wine grape industry on the Peninsula but have not attracted the same level of investor interest. Source: Stewart, D (2014).

Strawberries

The Shire is home to a significant strawberry production business. The cool climate and fertile soils favour the production of fresh fruit between November and May. Approximately 2000 tonnes of fruit is produced each season on 200 acres Main Ridge and 100 acres Boneo. In total it accounts for around 10% Victorian production and is valued at \$20m.



Avocados

There is one key grower marketing cooperative comprising seven local avocado farms in the shire. The properties have their fruit packed and branded as *Peninsula Avocados*. Orchards range in size from between 450 to 1500 trees. *Peninsula Avocados* was the first to commercially grow the Hass fruit in a 'cool climate' environment. These climatic conditions extend the growing season with fruit remaining on trees for around 12 months compared with seven months in warmer tropical growing zones. In 2013/14 harvest was around 200 tonnes which is generally all pre-sold into the Melbourne market. The fruit quality and flavour guarantees high prices with recent tray values rising from \$30-35 to \$60 / tray to meet recent consumer demand. Bulk 10kg boxes of small fruit prices also rose from \$25 to \$80 a tray. Source: Pers. Com Marshall (2014).



Livestock Industry

Beef

The consensus from the major livestock selling agencies servicing the Peninsula is that cattle numbers have continued to decline over recent years. This particularly relates to smaller holdings where previously they have run vealer enterprises which are showing poor returns for the work involved. Some of these properties have changed to finishing steers and some have destocked and reverted to cutting hay and silage for sale.

ABS data accounts for the 275 producers which responded to the last census which reported a figure of 14,522 beef cattle. An estimated 4000 additional cattle are held on smaller acreages which would not have been captured in census data. Dairy cattle (mainly on agistment) from Gippsland account for about 500 head. The continuing expansion of the equine industry on the Peninsula is also substituting horses on properties previously grazed by cattle.

The Peninsula soils and reliable climate make it well suited to growing productive perennial pastures for sheep and cattle production. Observations across some areas indicate that pasture quality is declining as poorer grass species such as sweet vernal and fog grass start to dominate, and in places noxious weeds such as blackberries invade paddocks.



As stock are removed from previously grazed properties pasture density and quality declines if those areas are either left to become rank or just cut once a year for hay which would only be poor of quality. The continuing reduction in property size over the years need not lead to a less productive beef industry however the focus needs to shift to what is the best contribution this area can make to beef production.

Small property owners involved in beef production accept that they are not commercial producers but typically take pride in whichever enterprise they choose. Smaller properties are generally not suited to a self-replacing herd as they will not be able to run the number of cows necessary to apply the selection pressure needed to at least maintain and preferably improve the genetic quality of their herd.

Vealer production where replacement breeding stock is purchased from outside alleviates this problem but still needs to manage the issue of running a bull on a property where paddock space can be limited for the 10 months of the year when the bull isn't required. Enterprises which concentrate on purchasing weaner and yearling steers for growing out and finishing show the most promise for the small property owner. Small lots of well finished cattle, which meet the carcase weight, muscle score, and fat condition specifications of meat processors such as ' to their buyers.

Sheep

During the latter half of the 20th Century there was a strong sheep industry on the Peninsula producing prime lambs and crossbred wools. The decline in sheep numbers since the collapse of the Australian Wool Corporation guaranteed price marketing system has been across Australia and areas such as the Peninsula have been hard hit as numbers declined to the point that sheep shearing and crutching services have all but disappeared.

The partial resurgence of the industry on small holdings is essentially the result of sheep breeds such as Dorpers and Wiltshire Horns, which naturally shed their wool, becoming more available. No longer needing shearers these breeds can easily be managed by small landholders with some basic yard infrastructure. These breeds have a naturally high fecundity and lambing percentages in excess of 150% can be expected. They don't grow out to the size of lamb required to meet the carcass weight required by the export trade, but they can, if managed properly comfortably meet the specifications of the domestic market and be sought by local butchers.

There is already an example of a grower who is marketing his lambs direct to a local butcher who sells them under the brand of "Coolart Lamb". The feedback from the butcher is that the local brand is attractive to consumers and they will ask for that lamb product. The grower is unable to meet the needs of this one butcher on a regular basis so there is clearly scope for this local lamb industry to expand to develop its own market, where local branding can be a very attractive incentive for butchers and restaurants servicing the tourism trade.

The returns to sheep producers for prime lamb and mutton have for years vastly exceeded the gross margins of beef production and the comparative ease of management and husbandry should make a small well run prime lamb enterprise an attractive option for small property owners who are inexperienced with livestock and unwilling to take on the challenge of running a cattle herd.



Industry summary

The Mornington Peninsula is and should remain a strong and sustainable agricultural region for the production of prime grass fed beef and lamb. There is a clear trend for various reasons that the beef industry is contracting and sheep numbers are historically very low.

During this period of uncertainty due to climate change it is important that each region optimises and encourages the best use of its natural resources by landholders. The Peninsula has a combination of both productive soil types and greater reliability of rainfall when compared to some other regions of Victoria.

There are many landholders who do not farm on a commercial scale but have demonstrated their personal and financial capacity to invest in their properties to produce the best product they can. Their capital investment to improve their farms with new fencing and stock handling facilities, pasture improvement and new machinery purchases, makes a significant contribution to the viability of other local businesses.

The number of cattle on the Peninsula would suggest that annual sales are around \$15-20m depending on market prices. The overall figure for contribution to the local economy would likely more than double that to \$40m if taking into account the services purchased and capital investment of these small enterprises.

It is in the interests of the local economy to investigate and develop new approaches to engaging with all landholders to promote and nurture grazing enterprises which can sustainably exploit both the Peninsulas natural farming assets and the growing local food economy, which has demonstrated its willingness to embrace local fresh produce. Source: Stewart, D (2014).



Viticulture Industry

The Mornington Peninsula viticulture industry is small but recognised for its high quality. Vineyard soils vary from site to site. Typically, they range from fertile red volcanic soils around Red Hill and Main Ridge to more widely dispersed, clay-based sand or loam duplex soils across the central the northern regions of the shire. The industry is acknowledged as the home of some of Australia's finest cool climate chardonnays due to the 'maritime climate' conditions experienced due to the two bays and a bass strait frontage. Pinot Noir and Chardonnay are the dominant plantings with smaller amounts of Pinot Grigio and Shiraz. Key industry statistics are as follows:

- Pinot Noir – 52% of total plantings
- Chardonnay – 27% of total plantings
- Pinot Grigio – 11% of total plantings
- Shiraz – 3.4% of total plantings
- The 2012 Mornington Peninsula Vignerons Diagnostic report estimates a total vineyard area of 950 ha vines producing 4,280 tonnes of fruit;
- An estimated 533 people are employed by wineries, wine grape grower and vignerons;
- An estimated \$3.6m in capital investment made by members in the 2011/12 season and similar amounts @\$3m were forecast in 12/13;
- The region produced sold an estimated 200,000 cases of local wine in 2012;
- The wholesale value of the industry is \$68.2m.
- Port Phillip Zone, GI registered 1997, Located 38°20'S, 144°58'E
- Terrain: 722 sq.km of undulating bushland trimmed by 193km of coastline
- Altitude: 25m-250m, Heat degree days: 1080-1570, Mean annual rainfall: 737mm-1000mm
- Growing season rainfall: 320mm-386mm, Mean January temperatures: 17.7°C-18.0°C
- Typical harvest period: March-May

Source: MPVA (2013).



Poultry industry

Broiler production

The local broiler industry consists of 64 chicken grow-out farms within the shire. They tend to be small – medium size businesses who produce 5.5 batches/year. Gaps between batches are about 10 days but can extend out turn around time if needed. This production system has a low environmental impact in terms of effluent run off, soil water pollution and land degradation. The main issue of odour is seasonal and ad hoc. The primary issue is when litter becomes wet especially in autumn.

The majority of growers have completed Chicken Care; an environmental care initiative of the Victorian chicken meat industry. It is designed to continuously improve the environmental and safety performance of meat chicken growing and to ensure that the industry is open to and meets broad community expectations.

There are two types of growing periods for meat chickens in the shire.

1. Day 35-42 – 1.8 – 2.0kg – these go to take-away eg. Fast food outlets
2. Day 54 => 3.5 kg boned out for breast and thigh meat

Approximately 30 million birds are grown out each year across the shire and are delivered to three main commercial processors: Inghams, Baida or La Onica. Current growing fees per bird depend on the type of production system and as of April 2014 are as follows:

- 83.2 cents / tunnel bird
- 76.2 cents / non tunnel bird
- 94.1 cents / free range bird

Processors own the chickens and contract local growers in a business arrangement as follows:

- The processors are responsible for supplying the ration mix (4 types dependent of growth stage) with feed supplied from feed mills in adjoining shires
- Growers business costs include
 - Infrastructure
 - Gas
 - Electricity
 - Bedding material
 - Water
 - Labour

Chicken litter is removed between batches and sheds cleaned / sterilised with this by-product being sold as manure to local market gardens. The proportion of birds / processor is estimated at:

1. Inghams:
2. Baida:
3. La Onica:

Processing The Ingham's poultry processing plant is located in the shire, which is an extremely valuable agri-business resource. Its central location ensures it is close to markets and labour sources. This keeps distribution and transport costs down and ensures labour and other services are available. Important regional features that support this successful local business are:

- Close proximity to a feed mill
- Guaranteed water supply
- Guaranteed electric power, preferably three phase
- Access for heavy transport for feed and live poultry
- Available labour, depending on farm size; and
- Available services such as tradesmen, servicemen and veterinarians

Egg production

According to the shires rates records there are 5 commercial egg farms located in the region. They vary in size and productive capacity. Three are free-range enterprises and the combined farms generate approximately 45m eggs / year. There is a trend towards free-range artisan egg production across the shire based on consumer demand for this type of product. An increasing number of farmgates sell small quantities of eggs on an ad hoc basis.

Pullets

Pullet production across the shire generates approximately 9m in production value / annum. Pullets are defined as pre-egg laying hens less than one year old. Point-of-lay pullet (4 months old) sales are quite common within the domestic market. However, the majority of commercially bred pullets are sold as “day old” chicks.

Source: VFF (2014), Wilson (2014), MPS (2012).

Fodder

Whilst the Mornington Peninsula climate and soils are capable of growing good quality pastures, that isn't the challenge, the problem is to conserve those pastures into quality hay. Quality hay is all about optimum timing of cutting and a sufficient number of warm to hot dry days following to ensure rapid curing of the cut swathe to a moisture content where it can be safely baled and maximum nutritional content preserved.

The probability of those critical factors coming together is unfortunately low for the Peninsula and much of the hay cut and baled in the region has often been subjected to unfavourable weather conditions and delayed cutting times because of the reliance on contractors unable to meet the needs of all their clients wishing to make hay at the same time.

Commercial hay producers now routinely condition their hay which simply means that as it is cut the pasture passes through a set of rollers on the mower which crimps the stems and leaves about every 20cm to enhance the rate at which the moisture can escape the plant and hence the number of days required for curing. Conditioning of cut pasture will certainly assist hay curing times on the Peninsula but inconsistent weather conditions in the spring remain the challenge. Source: Stewart, D (2014)



Aquaculture

Commercial fishers in PPB operate under the authority of a Western Port/Port Phillip Bay Fishery Access Licence. The total number of these licences is capped at forty-two. The existing licences can be transferred to new fishers but no additional licences can be issued. PPB commercial fishers are authorised to use a range of equipment types including longlines, mesh nets and haul seines to catch a variety of fish species such as sardines, King George whiting and snapper. These fishers provide fresh, high quality and sustainably harvested seafood to Victorian consumers, many of whom either choose not to or may be unable to participate in recreational fishing (DEPI 2013). According to the MP Marine Alliance the estimated value of production of aquaculture, seafood and fishing is \$13m. Source: Marine Sector Alliance Report (2014).



Artisan

Historically, food on the Mornington Peninsula has played a vital role in various aspects of cultural, social and economic prosperity. This relationship has many different components ranging from growing, manufacturing, purchasing and tourism visitation. The Mornington Peninsula is renowned world wide as a wine region; however, there is a lack of awareness of the range of local food and experiences on offer. From a consumer perspective there is a growing demand to better understand and appreciate what is produced close to home. This trend is resonating with a variety of demographic segments.

Food production on the Mornington Peninsula is rich in diversity and quality. It encompasses a broad spectrum of production scales from boutique “artisan” value added product through to broadacre farms. The food sector is a significant contributor to the local economy. It is estimated that the value of the industry is in excess of 20m per annum in output, Source: ABS (2011), Remplan (2014).



Industry development

The Agricultural Audit (2010) identified a significant gap in industry funding and support for the region. Many enterprises are small in size and productive capacity, The region has been limited in its ability to attract funding for technical on-ground projects and capacity building. 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.

Therefore, the baseline data generated through the audit identified specific production and quality capabilities, values of production and gaps in industry support. This consolidated knowledge enabled many opportunities to engage with key funding stakeholders, leverage dollars and support the implementation of partnership projects. Key funding and knowledge resource opportunities have been sought with the following organisations:

- Department of Environment & Primary Industries, Vic
- Victorian Farmers Federation;
- Regional Development Australia;
- Victorian Food Alliance (Deakin University);
- Monash University (student placement program)
- Agribusiness Gippsland – Industry support & development
- Port Phillip and Westernport Catchment Management Authority;
- Land Care;
- Sustainability Victoria;
- Department of Agriculture Forestry and Fisheries “Caring for Our Country”;
- Department of Education, Employment & Workplace Relations (DEEWR).

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 vegetables and fruits. The Shire engages with a number of key industry groups to provide guidance on rural economic development issues and projects.

Local industry partnerships

The strengthening of local agribusiness networks has been an important role of the Rural Business Officer. Raising awareness and understanding of the roles of various local industry groups enables the Council to provide support where necessary on a range of issues. Key organisations

- Victorian Farmers Federation (VFF) Peninsula Branch and Chicken Meat group
- MP Gourmet
- Food Industry Advisory Body (F.I.A.B)
- MP Fruit Growers
- MP Alpaca Industry
- MP Landcare Network
- Port Phillip & Westernport Catchment Management Authority
- Agribusiness Gippsland

Small Rural Landholder Network

Data from the agricultural audit (2010) provided substantial insight into various issues affecting small rural landholders in the region. Discussions with local industry leaders from the Victorian Farmers Federation (VFF) and Landcare reiterated the need for local learning networks that targeted individuals as well as the broader rural community.

A need to create a learning environment for non –traditional agricultural landholders ‘Rurbans’(Rural / Urbans) eager to learn about soils, water, vegetation and technical agricultural management strategies was identified by the shire. The network aims to:

- Foster collaboration & leveraging investment with service providers;
- Support strategic thinking to address regional issues;
- Encourage social interaction and building local area networks;
- Enhance improvements in community capacity building;
- Influence behavioural and on-ground practice change; and
- Is functional, purposeful and measurable in terms of outcomes and achievements.



To meet this demand for knowledge and skill building a **Small Rural Landholder Network (SRLN)** was established across the shire to encourage local rural landholders to actively network amongst themselves; feel comfortable sharing their limited agricultural experiences; and build technical knowledge and skills to enhance agricultural production systems critical thinking and on-ground action. A database containing approximately 250 landholder email addresses has been compiled and is used as a first point of contact to promote the SRLN through an email address created for the network. Topics that have been addressed through a combination of practical and formal workshops include:

- soil health & pasture productivity,
- grazing strategies & weed management,
- livestock breeding, water access & livestock management,
- regional branding, marketing & cooperatives; and
- fencing & cattle handling;

The SRLN fosters innovative community engagement, participatory and experiential learning opportunities. It provides a connected communication and information support service to ensure relevant and timely agricultural technical information can be disseminated. Opportunities for capacity building with landowners and benefit the broader natural capital across the MPS with weed and pest incursions minimised, water use efficiencies, soil health, vegetation and pasture management strategies linked to whole of catchment health and general improvements in the quality of production systems.

The richness in diversity of individual landholder background and experience and repeat attendance at technical workshops over the past 3 years provides evidence of the demand for such a network. Collectively the SRLN has the potential to enhance the capacity of significant tracts of highly productive agricultural land resulting in a thriving and vibrant peri-urban landscape.



Research & Development

The Mornington Peninsula Shire is a partner in a new 5 year sustainable agriculture project which will run to June 2018. “Demonstrating Sustainable Farm Practices in Western Port, Port Phillip and Yarra catchments” will work with landholders throughout the Western Port Catchment & part of the Port Philip Catchment to promote Sustainable Farming Practices. This project is supported by Port Phillip & Westernport CMA through funding from the Australian Government.

The project builds on previous Soil Carbon/Acidification research & development and will engagement with rural landholders across the Bass Coast, South Gippsland, Cardinia, Mornington Peninsula and Yarra Ranges shires.

A key aspect of the project is to establish 40 on-farm demonstration sites to showcase innovative and low environmental impact farming methods. The results of each site will be communicated through field days, discussion groups, and case studies. They will be evidence based and benchmarking will be used alongside regular monitoring to measure changes in productivity and sustainability.

Innovative tools such as iFarm tools, remote sensing & surveys will be introduced to assist farmers implement sustainable agriculture practices. Discussion group support is another key aspect of this project along with farm tours to other regions to challenge and inspire.



Landuse planning & support

The Mornington Peninsula Shire is an interface council. This reflects a region that is a composite mixture of urban settlements and rural landscapes. It is an intersection between urban growth corridors, green wedges, highly fertile agricultural farmland, significant primary and secondary food production businesses, functional ecosystems and diverse community demographic structures.

Gathering significant data sets on actual agricultural production and contributions to the local economy enhances the opportunities for cross sectoral collaboration on issues of strategic concern around food security and land use planning. Review of farm management plans submitted with green wedge dwelling applications determines sensible and sustainable agricultural propositions for properties applying for a dwelling permit. This action enhances rigor in combination with planning instruments to determine best practice, matching landuse to landscape capability.

Explicit policy objectives, planning instruments and implementation strategies provide a critical “front line” planning interface with community; with a high degree of discretionary power to implement specific and relevant measures to preserve agricultural land.

Mornington Peninsula Shire – Green Wedge Policy

The M.P.S has a significant GWZ (Figure 1), approximately 51,204 ha is size or 70% of the land mass within its boundary (M.P.S 2012). In 2012 an *Interim Green Wedge Management Plan* (M.P.S 2012) was prepared by council. Strategies are identified to improve management, support, enhancement and protection of associated landscape, environmental, natural resource, infrastructure and agricultural values, amongst others (D.P.C.D 2010).



Figure 5. Location of the Mornington Peninsula Shire (MPS) and associated Green Wedge area, in relation to the surrounding metropolitan Melbourne

The Mornington Peninsula Local Planning Scheme identifies long term directions about land use and development and provides the rationale for the zone and overlay requirements and particular provisions in the scheme. The relevant planning zone for which the Green Wedge Policy is aligned is found in Clause 35.04. The purpose of the Green Wedge Zone:

- *To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.*
- *To recognise, protect and conserve green wedge land for its agricultural, environmental, historic, landscape, recreational and tourism opportunities, and mineral and stone resources.*
- *To encourage use and development that is consistent with sustainable land management practices.*
- *To encourage sustainable farming activities and provide opportunity for a variety of productive agricultural uses.*
- *To protect, conserve and enhance the cultural heritage significance and the character of open rural and scenic non-urban landscapes.*
- *To protect and enhance the biodiversity of the area.*

Small rural landholdings form an integral part of the MPS landscape; the average rural holding size is 15.5ha. It has a distinguished agricultural history, is a key element of the local economy and provides significant natural capital benefits through its diverse contribution. Collectively, there are significant tracts of highly fertile and productive land that has the capacity to generate a wealth of economic, natural and social benefits for the community.

The M.P.S. *Interim Green Wedge Management Plan* supports the Green Wedge Zone planning commitment for agriculture and land management with thirty direct actions identified around this theme (Appendix I). This indicates an authentic commitment to industry protection and sustainability, however many actions are aspirational and contain NO implementation focus in the plan. The plan identifies significant pressures both **ON** the green wedge, to maintain the overall 70% of landscape coverage; and **WITHIN** the green wedge zone, where land fragmentation through development and sub division are likely to continue as through urban expansion and projected population increases from 150,000 – 180,000 between 2001-2031. However, the plan states strongly that agricultural production is an essential component to be protected within the GWZ, and has a significant role in terms of its contribution to a thriving landscape. Source: MPS (2012).



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Mornington Peninsula Shire: Summary of Agricultural Production

Industry	No. of land parcels	Total Area (ha)	Production type	Volume of production	Value of production (\$)	Trends (2012-14)	Data Source / Evidence
Market gardens	81	1852	Leafy greens, root vegetables, bunched vegetables	Tn/ha will vary significantly with the different crops grown ranging from 7tn/ha for broccoli to 50tn/ha for carrots.	Will depend on crops grown and the number of crops harvested in a year. For 1750 ha a gross return/ha/yr of \$120,000 would equate to \$210m. (Final data on salad mix still to come in but expected to be approx. \$50m)	ABS stats indicate there are 38 producers in the Shire. This local industry continues to grow in value supplying Victorian, interstate and export markets. Production systems are industry leading and best practice. However variable cost/ha for many crops continue to rise and are in excess of 80% of gross returns for most crops. Salad mix is an industry which has been able to innovate and develop state of the art engineering solutions to substantially reduce labour cost through automated sowing and harvesting systems. Processing, packaging, marketing and value adding strategies have highlighted what is possible through innovation.	David Stewart (Livestock & Horticultural consultant) contracted to undertake: 1:1 interviews with: • Farmers • Agronomists • Government • Consultants Review ABS 2011 Census data Calculate Gross margins of production Brian Hussey – Horticultural Consultant MPS Farmland Rate Database
Vineyards	164	1105 ha	Pinot Noir – 52% Chardonnay – 27%	5000 tn crushed 900 bottles / tn 327800 cases \$208 / case Grape value Pinot – 2600tn @\$2000/tn = \$5.2m Chardonnay -1350tn @\$2500 = \$3.4m Pinot Grigio – 454tn @ \$1962/tn = 0.89m Shiraz – 200tn @2300/tn = \$0.46m Other – 190tn@\$2000 / tn = \$0.38m	\$10.3m grape production \$68.2m (wholesale) \$3 m (cellar door food sales)	Decrease in export 18% in 2008 to 8% 2012 Profit increase 2012 3.6 m capital investment 533 employed Pinot Noir plantings (52%) dominate the landscape and are increasing UK, China/Hong Kong & Canada biggest export markets Business profitability increased between 2008-2012	M.P.V.A Diagnostic review and economic impact assessment report 2013 MPS Farmland rate database
Beef & Sheep, grains, dairy, mixed farming	665 (473 + 192)		Beef and sheep meat	2011 census reported 14522 beef cattle. An estimated 4000 additional cattle are held on smaller acreages not captured in census data. Dairy cattle 450 (mainly agistment) 450/year	\$24 m	Cattle numbers have continued to decline over recent years. This relates to smaller holdings where previously they have run vealer enterprises showing poor returns. Properties changed to finishing steers and some have destocked, cut hay and silage	ABS Census data (2012) Livestock agent interviews Local farmers interviews Industry consultant interviews MPS Farmland rate database

Industry Data source	No. of land parcels	Total Area (ha)	Production type	Volume of production	Value of production (\$)	Trends (2012-14)	Data Source / Evidence
Aquaculture	8 businesses	805	Blue mussels Fish	400	\$13m	42 capped licences	RemPlan 2014 data Marine Industry Alliance Report (2014)
Forestry	10	145	Timber Assorted wood products Christmas trees	NA	\$6.3m	A niche sector with potential for expansion of particular soil mapping units	RemPlan 2014 Data
Poultry	77	64 farms	Grower fees 83.2 cents tunnel 76.2 cents non tunnel 94.1 cents free range	Broilers 27 m Free range 3m Inghams 520,000 birds / week 170,000 Free range / week	\$90m \$200m value added production	The Inghams Somerville plant accounts for about 30 per cent of chickens processed in Victoria 2 Factory shifts / day	REMplan Environmental Health database VFF Chicken Meat President Inghams General Manager Shire Farmland Rate database
Equine	52	2276	Horse properties	Breeding Agistment Recreation 5000 horses	\$142m	Increase in equine industry demand for land Significant primary and secondary industry interactions	Equine Audit (2013)
Orchards	74	686	Apples, pears, olives, avocados	46 businesses 164000 trees	\$9.63m	It's worth noting that with both apple and cherry producers approximately 20% of trees are new plantings reflecting a level of stable optimism from growers for their industry.	Shire Farmland Rate database Local Farmer & Consultant interviews
Plant nurseries	30	185.66	Trees, shrubs, grasses, assorted perennials and annuals	75 businesses employing more than 1000 people	NGIV estimates the whole sale industry is worth \$105m. Retail – 20m Compost 20m	This is a growth industry on the Peninsula where water security, ideal growing conditions and a large Melbourne market makes it an attractive location for wholesale and retail producers.	Nursery Garden Industry Victoria (NGIV) database
Berries	3	140	Strawberries Blueberries Raspberries	2000 tonnes	\$20m		Shire Farmland rate data Farmer Business data
Hay / silage ABS data 2011	140	1932	Pasture hay – average quality	16000 tn x	\$2m	Seasonal conditions	ABS Census Data 2012
Olive trees	NA	NA	Fruit for oil	250000 trees x 5 kg x 0.15 oil yield x 1.1 density = 206,250 @10/litre	2.06m	MPOA disbanded in 2012 High cost of production Static industry – 250,000 trees Vary yield and oil content Pruning, processing, transport, costs, storage tanks, bottling Saturated market	ABS Census Data 2012 Ag Audit 2010 benchmark
Cherries	8		Fresh fruit	U – Pick @ \$12/kg	1m	Stable plantings Seasonal variability impacts	Local Farmer interviews ABS Census data (2012)
Avocados	7	NA	Fresh fruit	300,000 fruit	0.5m	Fruit production increasing Demand for more water and land is critical to capitalise on this emerging enterprise	Farmer interview (Marketing cooperative)

Industry	No. of land parcels	Total Area (ha)	Production type	Volume of production	Value of production (\$)	Trends (2012-14)	Data Source / Evidence
Allied Industries	NA	NA	Chicken manure / Seed, fertiliser, chemicals Farm machinery	4m tonne approx 8-10% production costs Approximately 25 people are employed in this area. Approximately \$8,000,000 to \$12,000,000	(\$6/m3) = 25m 6m	- Four accredited and H.A.C.C.P. audited contractors - Total turn over \$25,000,000 - Approx. 30 people employed It is noteworthy that this Allied Industry represents between 8% to 10% of production costs. Also of note, Spinach and Baby Spinach constitute by far the largest seed sold. Number of people employed approx. 25	Brian Hussey Horticultural Consultant (2014)
Artisan produce	NA	NA	Dairy, Berries, truffles Deer, Herbs, citrus Stonefruit, garlic Potatoes, tomatoes Figs, pomegranates Organic produce Heirloom produce Alpacas, cut flowers Nuts, cheese, meats Beer, cider, spirits Terines, chocolate, fudge, mushrooms	NA – more work to be done	\$20m	There is limited value of production information available for this combined group of primary and secondary producers.	ABS Census data (2012) MPS Local Food Strategy Remplan 2014 data sets 1:1 interviews Agricultural Audit (2010)