Report to:

Wanganui District Council

ANALYSIS OF KEY SECTORS AND THEIR ROAD USE

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Key Sectors and their Road Use

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1 Summary

This report describes the key sectors in the Wanganui District and shows their economic contribution to the Wanganui Economy. It also aims to describe freight movements in and out of the Wanganui District.

The report provides Wanganui District Council (WDC) with:

- a clear description of the key sectors in the Wanganui District
- the key sectors' contribution to the Wanganui District economy in terms of GDP and employment
- a description of the district's transport system and the key sectors use of roads (for freight purposes).

The analysis provides the WDC with information that will allow them to better assess the value of key sectors to support roading investment decisions. However, decisions still need to be considered in the context of the importance of the primary sector to the overall sustainability of the Wanganui District.

The seven key sectors considered for this analysis are the forestry, meat processing, wool, dairy, horticulture (fruit and vegetables), horticulture (cropping), and pork. The key sectors include both the production and processing that occurs in the Wanganui District.

In 2010, Wanganui employed 15,940 Full Time Equivalents (FTEs) and generated around $2.1 billion in regional GDP through 4,100 businesses. Based on the analysis, the seven key sectors are responsible for 15 percent of employment, 23 percent of GDP and 19 percent of business units in the Wanganui District.

	Employment (FTEs)	GDP ($mn)	Business units
Meat	1,339	217	302
Wool	365	35	109
Forestry	242	91	242
Hort (fruit & veg)	219	23	50
Dairy	167	18	56
Hort (cropping)	124	19	17
Pork	18	2	6

BERL Regional Database, 2010

The Meat sector contributes the most in terms of GDP ($217 million), FTEs (1,339) and number of businesses (302) in the Wanganui District. AFFCO has two plants in the Wanganui District, while Mars Petcare also uses meat in its products.

Combining meat, wool and pork, the livestock production and processing sector employs 1,720 FTEs, and generates $253 million in regional GDP through 417 businesses.

The forestry sector is the second largest sector in the Wanganui District employing 242 FTEs, contributing $91 million to district GDP through 242 business units. A significant amount of land in the Wanganui District is in forestry, and Wanganui is a major producer in the Manawatu-Wanganui region. The BERL regional database suggests that there are four saw millers within the Wanganui District. However, upon further investigation, we found no sawmills within the District. The nearest sawmills are in Ohakune (WPI International Tangiwai Sawmill) and Waverley (Waverley Sawmills Limited). There is a wood processor in the Wanganui Eastown Timber Processors Ltd, which provides processing services for North Island sawmillers and traders, and exports niche products into Australia. Sawn timber is transported throughout the central and lower north island. However, logs are the major export commodity in the forestry sector by volume. The analysis suggests that the Wanganui District produces five percent of New Zealand’s forestry output.

Wool is the third largest of the key sectors in the Wanganui District, with 365 FTEs, contributing $35 million to GDP with 109 business units. However, the wool sector is closely tied to the meat sector in relation to sheep farming.

As noted earlier, these values are in terms of production and processing only. As the key producers in the district (notwithstanding manufacturing and tourism), these sectors are the key drivers of the Wanganui economy, with the township and other settlements developing largely to service the primary sector.

As such, these sectors support a large proportion of the other sectors such as wholesale and retail, energy and communications, as well as business services. As such their real value is significantly higher than the direct activity stated. While the report does not consider regional multipliers, at a national level, multipliers across these sectors for GDP and employment range between two and four.

Wanganui District has 220km of urban roads and 615 km of rural roads. It is connected to the wider region through the State Highway Network – SH3 and SH4. The District’s transport infrastructure also includes a rail line (Marton- New Plymouth), a port, and an airport.

Freight movements across the various sectors depend upon the level of processing undertaken within the Wanganui District and surrounding districts. There are two major meat processors in the Wanganui District (AFFCO Imlay and Land Meats) along with Mars Petcare. In the forestry sector, the only major processor is Eastown Timber Ltd. In the dairy sector there is Open Country. For wool there is Cavalier Bremworth, although they only utilise scoured wool rather than raw wool. Similarly, Tasman Tanning imports their hides from throughout the North Island. There is some processing of kiwifruit (although this is mainly packing). Almost all production is ultimately exported either internationally or out of the region. For example, while not a major exporter, Land Meats is a major supplier to supermarkets throughout New Zealand.

In general, processors collect raw materials from throughout the central and lower North Island. Similarly, Wanganui produce is not necessarily processed in Wanganui district, and is transported to processors throughout the North Island.

Processing in Wanganui District is not reliant upon Wanganui produce as it collects from around the country. Therefore, for Wanganui District, the importance of local roads is mainly to the farmers. Local roads allow for the collection of produce, which is then transported (mostly on the State Highway system) to processing plants or ports around the North Island. The rural roads form a crucial part of the economic activity within the district in terms of allowing the movement of production to the State Highway system, where goods are then transported to the processor or exporter, wherever that may be.

In most cases, industries operate across district borders, based on the location of farms and processors. From a Wanganui perspective, the value of those sectors would be higher if the product was processed locally. However, regardless of where processing is located, farms will continue to require local roads to transport their produce from the farm gate to market. And, as the report shows, farms currently make a significant contribution to the Wanganui district economy.

With all the key sectors in the Wanganui District showing increasing levels of employment, and the expected growth nationally in the commodity sectors due to rising prices, rural roads will continue to play a role in the economic development of Wanganui District. As well the projected growth of logging in the Wanganui District will place increasing pressure on local roads.

2 Introduction

This report has been prepared by BERL for WDC, who are interested in balancing the cost of key sectors on roads against the economic benefits of these sectors to the district.

The report aims to provide a quantitative assessment of sector activity at a district level, which the WDC can use to better communicate the value of key sectors to support district roading investment decisions.

2.1 Approach

The analysis identifies key sector contribution to GDP (at an aggregate level) and to Full Time Equivalent (FTE) employment at an industry level to determine the contribution of each key sector to the Wanganui District economy. Where possible, expenditure and export estimates are identified. Finally the analysis estimates freight activity within the district for each of the key sectors.

The analysis covers the key primary/processing sectors (the sector value chain) that are major road users in the Wanganui District. These include forestry, dairy, livestock – meat, wool and pork, and horticulture – cropping and fruit & vegetables.

As the approach suggests, the analysis is largely desk-based. It draws primarily on BERL's Regional Database, which contains employment and business unit data for 477 industries, and GDP data for 53 industries, at a district level. The analysis also draws on other publicly available data such as the LIC Dairy Statistics, and MAF publications including the National Exotic Forest Description and the Situation and Outlook for New Zealand Agriculture and Forestry.

In relation to the key sectors' use of roads, the report draws on the Ministry of Transport's National Freight Demands Study (2008) and a Hyder report to Horizons Manawatu (2010).

WDC was consulted to identify Wanganui's key companies and their locations. Finally, BERL contacted key industry participants to identify and verify activity.

2.1.1 District Boundaries

An important concept to note is that district boundaries are a theoretical construct and do not constrain the movement of industries, businesses or workers. Rather, it is the resources and infrastructure that determine where activity occurs. Therefore, while the processing and employment may be located within the district, the raw material may be grown outside the district.

For this analysis, we are interested in the employment and GDP contribution within the Wanganui District. However, we need to be cogniscent of the fact that key processors or producers may be located outside of the district.

We have therefore taken into account the wider supply chain when discussing the key sectors.

3 Key Sector Analysis

The analysis breaks the key sector analysis in the Wanganui region into five major groups. Two of these groups have been split further, giving a total of seven key sectors.

The value chain for each sector includes production and processing, but does not include suppliers into the sector such as transport, business services, and wholesale/retail.

These key sectors have been selected as they are driver industries in the primary sector and are also heavy users of rural roads in Wanganui.

- Forestry
- Livestock farming[1]
    - Meat
    - Pork
    - Wool
- Dairy
- Horticulture
    - Cropping
    - Fruit & vegetables

Information for the analysis has come from a number of sources. The main sources of data are the 2007 Agriculture Census and the BERL Regional Database 2010. Specific sources have been used for each key sector including industry organisations.

3.1 Contribution of Key Sectors to employment and GDP

The BERL Regional Database (Business and Economic Research Limited, 2011) is used to identify employment, GDP contribution and business units by key sector. The analysis covers the primary and processing components of the sector and does not consider their use of other input industries (i.e. transport, business services, wholesale) as well as the impact of their employment and expenditure on other services such as retail, cultural and social services.

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[1] It is difficult to split out the wool industry from the meat industry as sheep farming contributes to both industries. For the purpose of this report, sheep farming has been split in two and each split combined with the relevant production and processing activity to determine values for the Meat and Wool industries. Services to agriculture have been split across the primary sectors according to their relative employment.

Multipliers

The scope of the project does not allow us to calculate the multiplier effect of these key sectors. However, they do represent major producing sectors upon which the region is dependent for employment. It is the initial activity attracted to these sectors that support the range of other sectors suggested in the previous paragraph.

For example, at a national level in 2008, the forestry and logging sector had an employment multiplier of four, which means that every person employed in the forestry and logging sector, supports employment for a further three FTEs. The sector also has a GDP multiplier of 3.4, suggesting an additional $2.4 million in regional GDP can be attributed for every $1 million of GDP generated in the Forestry and Logging sector. Within the primary sector, employment multipliers nationally are in the 2.0 to 2.5 range, and GDP multipliers are between 2.4 and 3.1. Note that this is at the national level and, depending upon the level of activity within Wanganui, the multipliers could be higher or lower. Identifying the multipliers for Wanganui would require regional input-output tables, which are not available for this project.

3.1.1 Wanganui employment and GDP

In 2010, Wanganui employed 15,940 FTEs and generated around $2.1 billion in regional GDP through 4,100 businesses. The breakdown for key sectors is shown in Table 3.1.

Table 3.1. Key sector contribution to Wanganui District economy, 2010

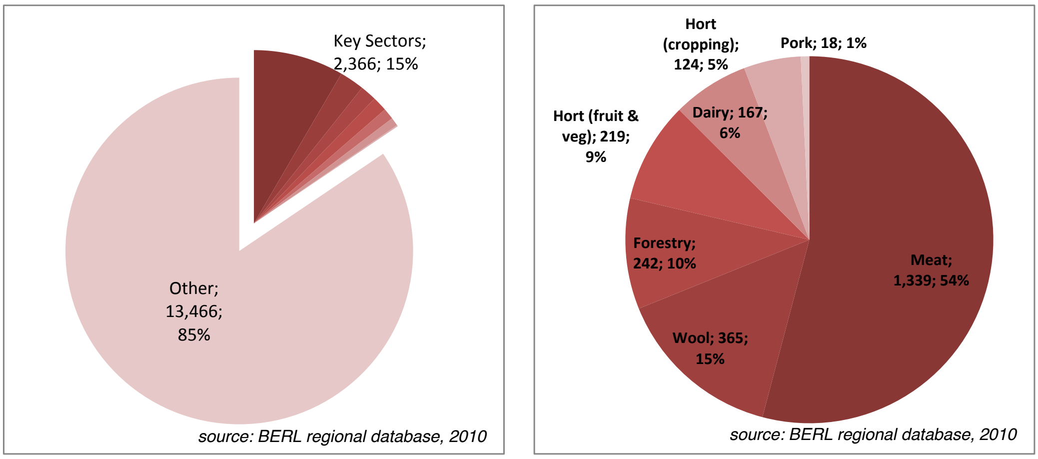
Sector	FTEs	GDP ($m)	Business Units
Meat	1,339	217	302
Wool	365	35	109
Forestry	242	91	242
Hort (fruit & veg)	219	23	50
Dairy	167	18	56
Hort (cropping)	124	19	17
Pork	18	2	6
Key Sectors	**2,474**	**405**	**782**
Other	*13,466*	*1,693*	*3,327*
Total Industry	15,940	2,098	4,109

source: BERL Regional Database, 2010

FTE Employment

As Figure 3.1 shows, the key sectors (primary and processing) account for 15 percent of employment in the Wanganui District. The greatest employment is in the meat industry followed by wool (although both are inter-related in relation to sheep farming), and then Forestry and Horticulture (Fruit and Vegetables).

Figure 3.1. FTE employment by key sector, Wanganui District, 2010

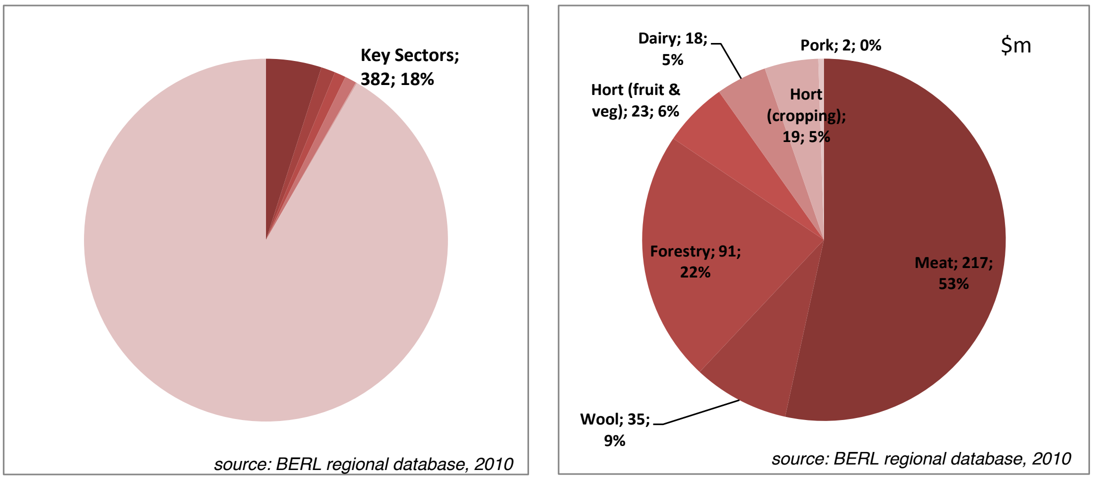


Meat production and processing employs 1,339 FTEs and accounts for 54 percent of key sector employment. Wool production and processing employs 365 FTEs and accounts for 15 percent of employment in key sectors. Combined, the two horticulture sectors account for 14 percent of employment in the Key Sectors.

<u>GDP</u>

The relative proportion of GDP is similar to employment, with the key sectors again accounting for 18 percent of regional GDP. This is shown in Figure 3.2.

Figure 3.2. GDP by key sector, Wanganui District, 2010

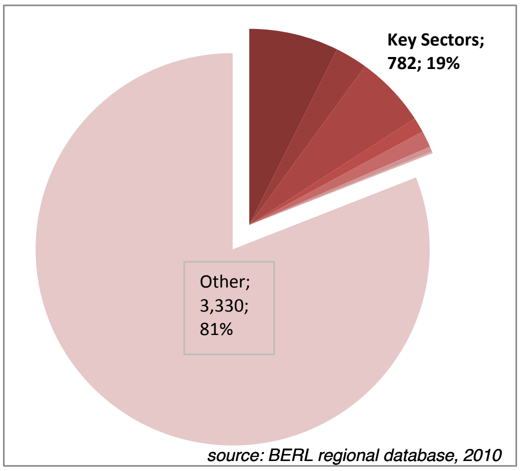


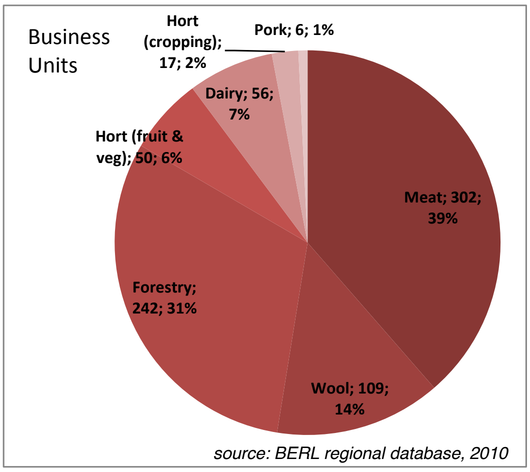
The relative contribution of the key sectors, however, changes slightly. The contribution of the wool sector to GDP drops to 9 percent, while forestry increases to 22 percent. Meat processing declines slightly to 53 percent.

<u>Business Units</u>

In terms of business units, the key sectors account for 19 percent of all businesses in the Wanganui District (as shown in Figure 3.3).

Figure 3.3. Business units by key sector, Wanganui District, 2010





The meat industry accounts for the largest proportion of business units within the key sectors, at 38 percent. This is followed by Forestry (31 percent) and then Wool (14 percent).

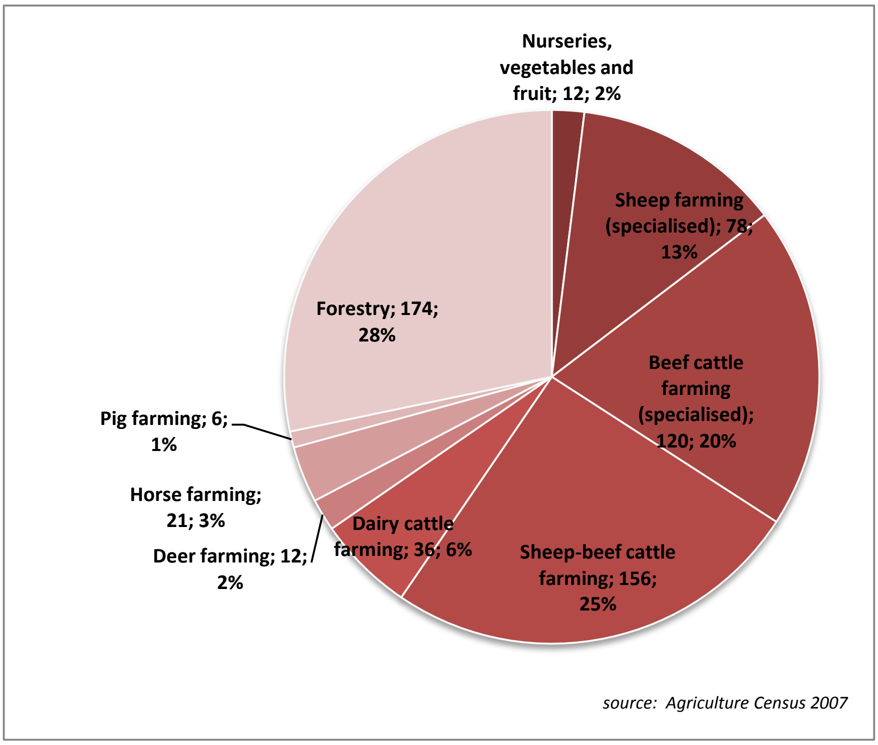
3.2 Primary sector in Wanganui District

3.2.1 Number of Farms

The key industries being analysed are all primary-sector based. At a territorial level, the most thorough comparable data across primary activity is from the 2007 Agriculture Census (Statistics New Zealand, 2007).

While this does not give us an up to date number for activity, it does allow us to analyse the relative importance of each sector to the district, and within the region. Figure 3.4 shows a breakdown of Wanganui farms by farm type.

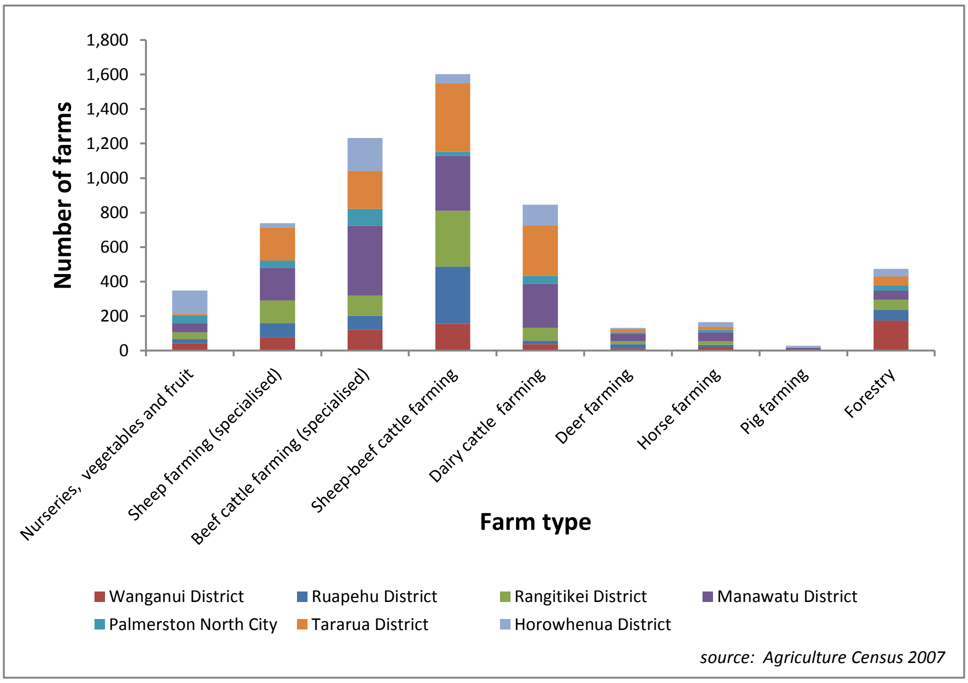
Figure 3.4. Number of farms by farm type, Wanganui District, 2007



The primary sector in Wanganui is dominated by sheep and beef farming (sheep farming specialised, beef cattle farming specialised, sheep-beef cattle farming); and forestry. .

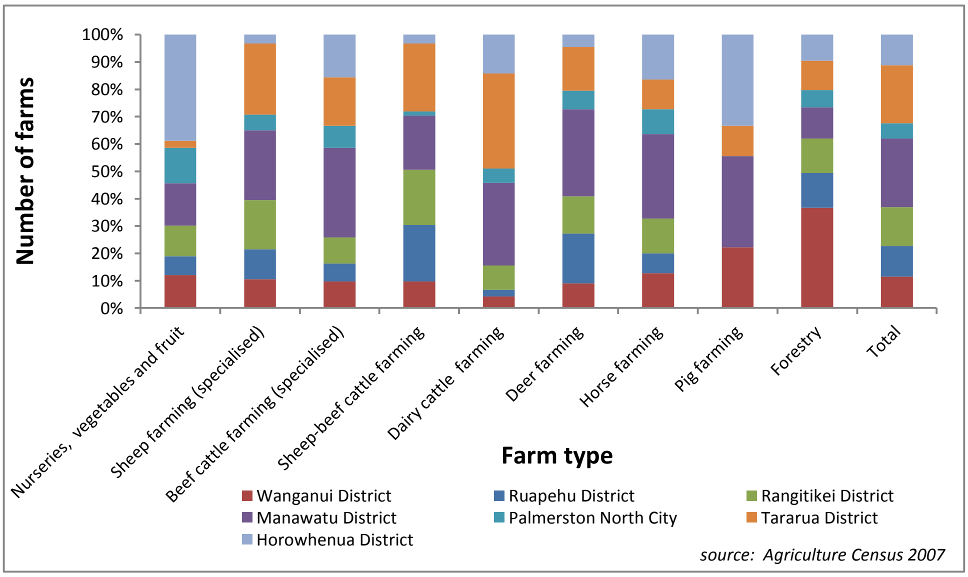
This is consistent with the Manawatu-Wanganui region, where sheep and beef farming is the dominant farm type; followed by dairy cattle farming and then forestry (see Figure 3.5).

Figure 3.5. Number of farms by farm type, Manawatu-Wanganui region, 2007



As shown in Figure 3.6, Wanganui accounts for around 10 percent of farms in the Manawatu-Wanganui region. However, in forestry, it accounts for around 36 percent of farms and in pig farming it accounts for around a quarter of the farms.

Figure 3.6. Share of farms by farm type, Manawatu-Wanganui region, 2007

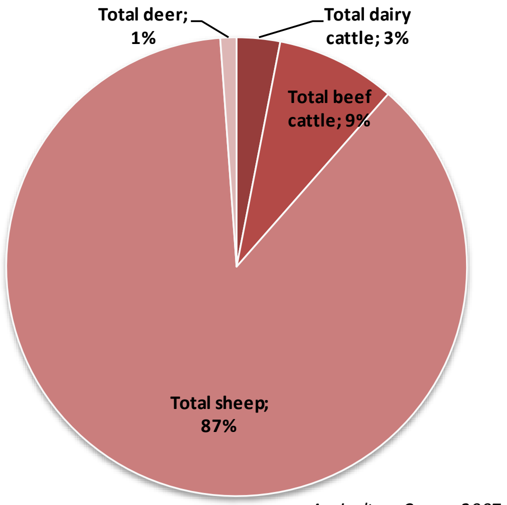


In absolute terms, sheep and beef farming are the major primary sectors in the Wanganui District and the Manawatu-Wanganui region. However, in relative terms, forestry and pig farming are areas where Wanganui is a major contributor to the sector in the wider Manawatu-Wanganui region.

3.2.2 Pastoral Sector

Two other sets of data to put the key sectors into perspective are livestock numbers from the 2007 Agricultural Census, and 2010 Gross Output by pastoral service from Beef + Lamb Economic Service.

Figure 3.7. Livestock Numbers, Wanganui District, 2007

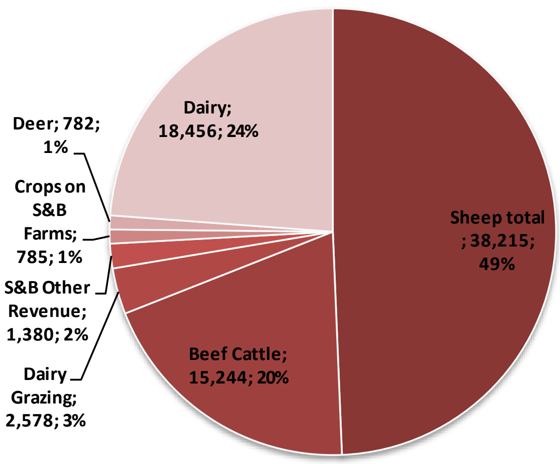


source: *Agriculture Census 2007*

Looking at the proportions, sheep accounted for 87 percent of livestock numbers in 2007. Sheep contribute to both the meat and the wool sectors. The second largest group was beef cattle at 9.0 percent. There was a significant drop to dairy cattle (3.0 percent) and deer (1.0 percent). Pig numbers were classified, and not available.

More recent data from Beef + Lamb New Zealand Economic Service shows the gross output in 2010 across pastoral services in Wanganui at around $77 million.

Figure 3.8. Pastoral Sector Gross Output ($000), Wanganui, 2010



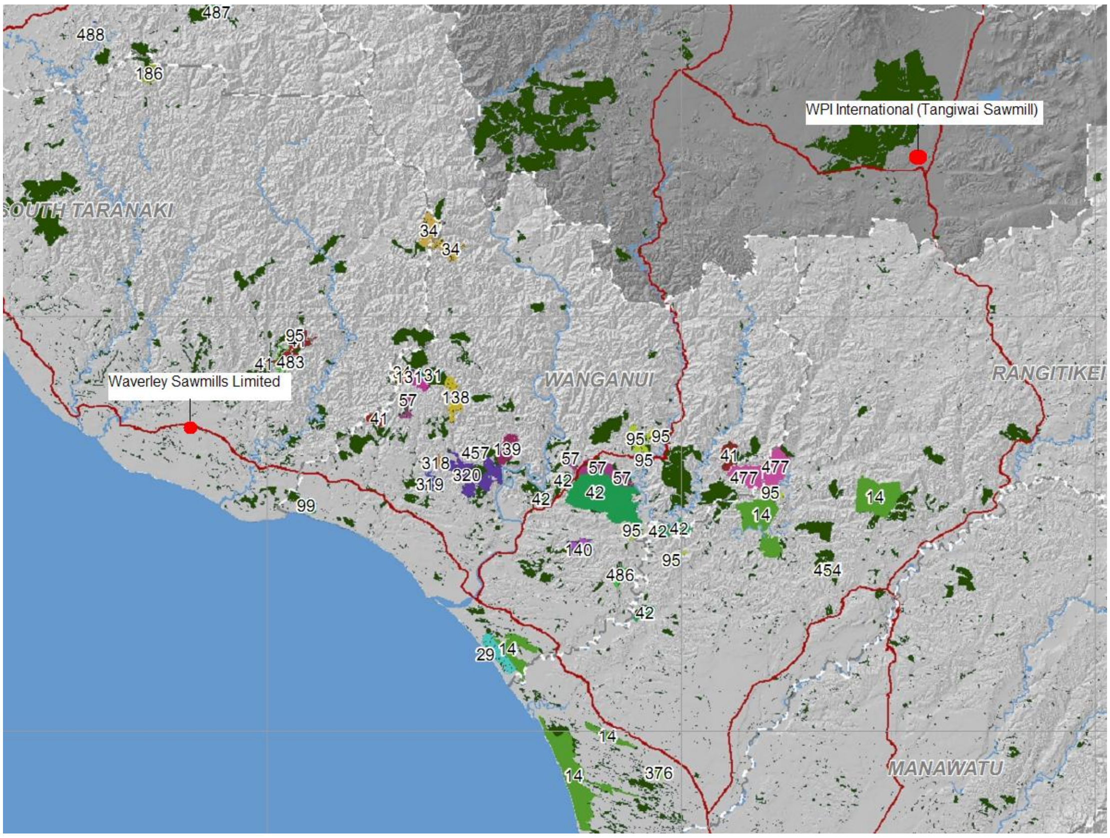
source: *Beef + Lamb NZ Economic Service*

Figure 3.8 shows that sheep farming accounts for close to 50 percent of gross output generated in the pastoral sector in Wanganui. Dairy is the second largest, contributing around a quarter of gross output (and a further 3.0 percent from dairy grazing), while beef cattle farming accounts for a fifth.

4 Forestry

The exotic forest ownership/management in the Wanganui District is outlined in the figure below. The figure is taken from MAF's exotic forest ownership/management wood supply region map for the Southern North Island. The Wanganui District is shown by the faint white dotted outline, the major roads are shown by the red lines, and the numbers and colours represent different forests throughout the district.

Figure 4.1. Exotic forest ownership/management, Lower North Island, 2008



Source: MAF, 2008 Forest Ownership Map

Major Forests in the Wanganui District include:

- Ernslaw One (number 14 above) – Fourth largest forest estate in New Zealand, and has a sawmilling operation in Ohakune.
- Global Forest Partners LP (Number 477)
- Tuamata Forestry Company (Number 320)
- Matariki Forests (Number 42): Third largest forestry company in New Zealand with approximately 130,000 hectares of plantations across the country.
- Arbor Forestry Limited (Number 95)
- Melton Super Trees (Number 138)

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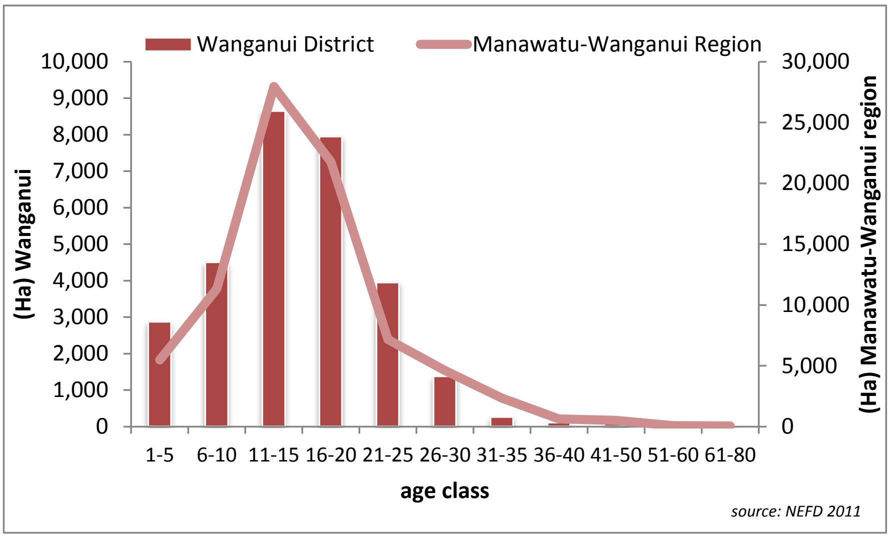
Most output is either exported as logs or processed into sawn timber or other wood products – such as paper, pulp or MDF. Forest residue can be used as firewood or mulch. There are no sawmills in the Wanganui District. The nearest sawmills are in Ohakune (WPI International Tangiwai Sawmill) and Waverley (Waverley Sawmills Limited). These sawmills are represented by the red dots in Figure 4.1 above.

4.1 Production

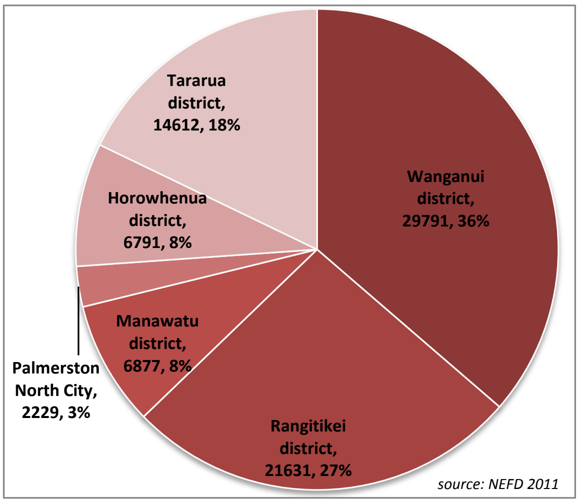
The Wanganui District has around 29,800 hectares planted in forest (Ministry of Agriculture and Forestry, 2011). As shown in Figure 4.2, the majority of the trees are will be coming on-stream for harvesting over the next 15 years.

Figure 4.2. Forest area by age class, Wanganui and New Zealand, 2010



The age profile is relatively similar to the Manawatu-Wanganui region. However, this is because, Wanganui District accounts for a large proportion of the forest plantation in the Manawatu-Wanganui region as shown in Figure 4.3.

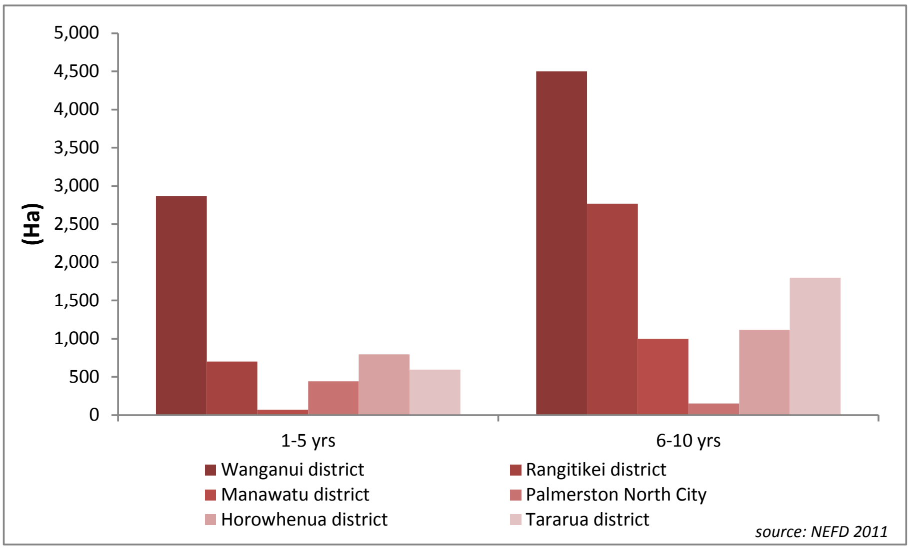
Figure 4.3. Forest area by district, Manawatu-Wanganui region, 2010



The Wanganui District accounts for over a third of the Manawatu-Wanganui region's forest area. Together with Rangitikei district, where the processing infrastructure is likely shared, their share of total forest area is close to two-thirds of the Region (63 percent). According to BERL's calculations, Wanganui's estimated planted forest roundwood removal is 898,000 m^3 annually, which is five percent of New Zealand's annual clear-fell yield of 18,847,000 m^3.

The Wanganui District has a relatively high proportion of new plantings compared to the rest of the Manawatu-Wanganui region as shown in Figure 4.4.

Figure 4.4. Forest area by new plantings, Manawatu-Wanganui region, 2010



4.2 Processing

According to the BERL Regional Database, there are a total of 21 wood processors in the Wanganui District. The BERL Regional Database suggests there are four sawmills in the district. However, we have not been able to identify these upon further investigation. There is a processing facility, Eastown Timber Processors Ltd, which provides processing services for North Island sawmillers and traders, and exports niche products into Australia. There are also 10 structural component manufacturers and five wood product manufacturers. In total, it is estimated that the processing side of the wood industry employs 93 FTEs.

4.3 Employment and GDP

Table 4.1 shows the contribution of the Forestry sector to the Wanganui District's economy in terms of GDP and employment in 2010.

Table 4.1. Forestry employment, GDP and businesses, 2010

Forestry	Total 2010	% of District	% of national Forestry
Employment (FTEs)	242	1.5%	1.0%
GDP ($mn)	91	4.3%	1.9%
Business units	242	5.9%	3.1%

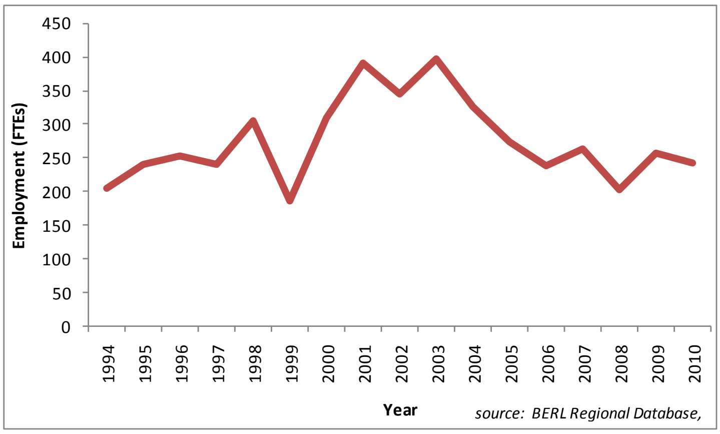
BERL Regional Database, 2010

The forestry sector directly employed 242 FTEs in the Wanganui District in 2010. The forestry sector provides a relatively small proportion of all employment (1.5 percent) in the district. However, it contributes $90 million to the district's GDP and has a relatively large amount of business units (5.9 percent).

The Wanganui District has approximately 2.0 percent of the total land planted in commercial forestry in New Zealand. However, the Wanganui District's forestry sector contributes 1.0 percent of national forestry employment, 1.9 percent of national forestry GDP and 3.1 percent of all forestry business units in New Zealand.

Figure 4.5 shows the number of FTEs employed in the forestry sector in Wanganui over the last seventeen years.

Figure 4.5. Forestry employment, Wanganui District, 1994 - 2010



Employment in Forestry in the Wanganui District peaked in the early 2000s and then declined to 2006 before levelling out around the mid 200 FTEs.

4.4 Location of activity and transport

WDC has estimated that, with more than 50 percent of the district's forestry estate reaching harvestable age in the 2020 – 2030 period, logging will generate approximately 270,000 truckloads of harvested logs (over that period), with most of these movements on low volume rural roads en route to State Highways 1, 3 and 4 (Wanganui District Council and New Zealand Transport Agency, 2009).

The movement of logs varies considerably with market conditions and the logisitical capabilities of the industry. Almost all logs destined for pulp are sent to the WPI's Pulp plant (next door to it's sawmill) in Ohakune. Logs from within the Wanganui District, can be sent to various sawmills in the Lower North Island, from Waverley, Ohakune, Levin, Masterton, Foxton to Dannervirke.

Hyder Consulting Ltd (2010) considered that the location and concentration of forestry blocks and sawmills in the Manawatu-Wanganui region would impact on the following points on the land transport network:

- The local roads and state highways which connect forestry blocks in Maxwell, Otamatea and Fordell-Kakatahi to sawmills in Waverley and Wanganui,
- Local roads in the Wanganui District that connect to either SH1 north of Marton or SH4 north of Wanganui
- SH4 north of Wanganui
- SH3 between Palmerston North and Waverley (part of which is in the Taranaki region)
- Local roads connecting forestry blocks to state highways, especially those between SH3 north of Bulls and SH4 north of Wanganui
- Local roads and state highways connecting forestry blocks in western coastal areas between Otaki and Wanganui, including Sanson and Waitarere:
    - Local roads connecting areas on the western coast with SH1 north of Levin
    - SH3 between Waverley and Palmerston North

These impacts are due to logs being transported between forestry blocks and sawmills. The sawmill output and the export of raw logs impacts significantly on SH3 between Wanganui and Bulls and SH1 between Levin and Wellington.

The majority of logs grown in Wanganui are transported directly out of the district, either to processing plants further north or direct to ports for export as logs.

In terms of logs, the majority are exported through Tauranga. In relation to Wanganui, logs can go through Tauranga, New Plymouth or Wellington.

Table 4.2. Log exports by port, 2009 - 2011

Port of Loading by volume	2 009	2 010	2011 (first half)
Whangarei	13%	12%	13%
Auckland	0%	0%	0%
Tauranga	**41%**	**39%**	**38%**
Gisborne	12%	12%	13%
New Plymouth	**0%**	**1%**	**1%**
Napier	8%	8%	8%
Wellington	**4%**	**4%**	**5%**
Nelson	9%	7%	7%
Picton	3%	4%	5%
Lyttelton	2%	2%	2%
Timaru	1%	2%	2%
Dunedin	4%	5%	5%
Bluff	1%	2%	2%

source: Statistics New Zealand

The only significant processing of logs within Wanganui occurs at Eastown Timber Limited. Their product is sold throughout the North Island with some exports into Australia.

5 Meat

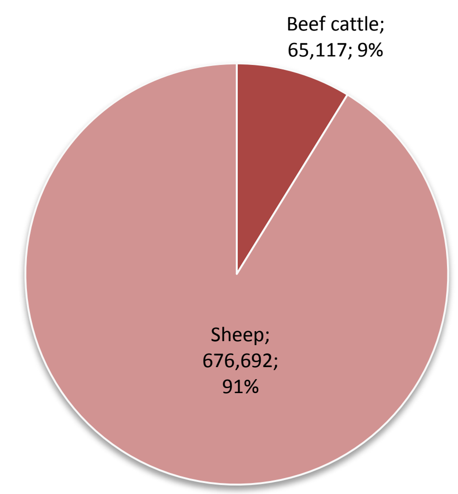
Meat production and processing covers all livestock apart from dairy, horse and pig farming. Poultry (meat) is also included.

Tasman Tanning processes cattle hides for leather, which are largely exported as hides. Tasman Tanning employs around 200 people and has a turnover above $50 million. This activity has not been captured in the analysis.

5.1 Production

As shown in Figure 5.1, the Wanganui District is heavily reliant on its sheep population, with 677,000 sheep in 2007. Beef cattle only accounts for nine percent of stock in the Wanganui District.

Figure 5.1. Total beef cattle and sheep population, Wanganui District, 2007



source: Agriculture Census 2007

Livestock grown in Wanganui District is not necessarily processed locally, with major processors sourcing product from throughout the country.

5.2 Processing

Similarly, processors in the Wanganui District source their carcasses from throughout the North Island.

AFFCO Imlay is a modern equipped, Ovine/Calf processing facility and also has a rendering plant. AFFCO Imlay produces a full range of lamb and mutton chilled and frozen cuts and Veal cuts during the calf season. AFFCO Imlay also produces a full range of offal from all the species processed on the site. The rendering plant produces ovine or mixed meat and bone meal and tallow from its rendering plant (AFFCO).

AFFCO also runs Land Meats Ltd, which produces around 18,000 tonnes of meat annually – beef, lamb, pork and goat. Land Meats supplies Foodstuffs – around 65 percent of production; with the remaining 35 percent exported.

Mars Petcare is a company which produces pet food. Mars Petcare sources approximately 15,000 tonnes per year of its resources such as (red meat, chicken, packaging, fish) from within and outside of the Wanganui District.

5.3 Employment and GDP

Table 5.1 shows the contribution of the meat sector to the Wanganui District's economy in terms of GDP and Employment in 2010.

Table 5.1. Meat - employment, GDP and businesses, Wanganui District, 2010

Meat	Total 2010	% of District	% of national Meat
Employment (FTEs)	1,339	8.4%	2.5%
GDP ($mn)	217	10.3%	4.2%
Business units	302	7.3%	1.1%

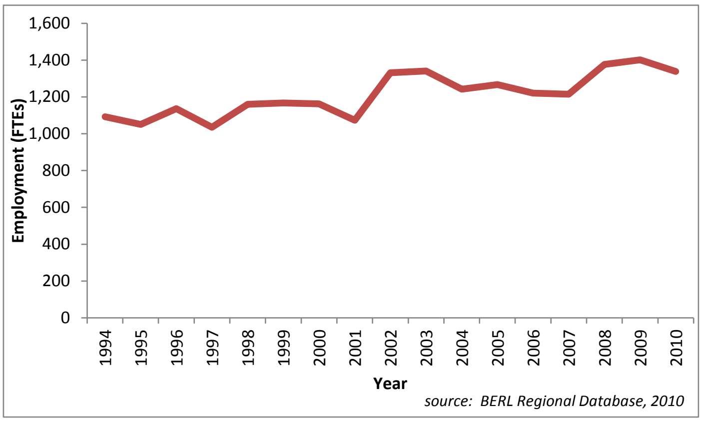
BERL Regional Database, 2010

In 2010, the meat sector directly employed 1,339 FTEs in the Wanganui District. The meat sector provides a relatively large proportion of all employment (8.4 percent) in the district and contributes $217 million to the district's GDP. There are approximately 300 businesses (7.3 percent) that are associated with the meat sector in the Wanganui District (mainly in meat processing).

The meat sector in the Wanganui District contributes significantly to the national meat industry, contributing 4.2 percent of the meat industry's GDP. The meat sector in Wanganui contributes 2.5 percent of all employment and 1.1 percent of all business units in in the meat sector nationally.

Figure 5.2 shows the number of FTEs employed in the meat sector over the last seventeen years.

Figure 5.2. Meat employment, Wanganui District, 1994 - 2010



Employment in the meat sector has recently decreased from 2009 to 2010. This could be due to the decline in livestock numbers seen nationally. Other than that, employment has fluctuated in previous years due to export conditions in the market.

5.4 Location of activity and transport

There are six processing companies located within the Manawatu-Wanganui region. As well as the two AFFCO plants (Imlay and Land Meats) in Wanganui, there is Riverlands Manawatu in Bulls, Manawatu Beef Packers and Ovation New Zealand Limited in Feilding, and the CMP Rangitikei outside of Bulls. Silver Fern Farms also has a processing plant in Waitotara, which is in South Taranaki.

AFFCO has three processing plants: Imlay in Wanganui, Manawatu Beef Packers in Feilding and Wairoa in the East Coast. Their stock can sometimes get sent to Rangiuru when capacity at the other three plants is full. Imlay processes lamb and mutton. In the 2008 season, Imlay processed 970,000 lambs, 440,000 mutton and 80,000 calves. AFFCO processes more than 150,000 tonnes of meat a year. Beef cattle are mainly processed in its Manawatu Beef Packers plant in Feilding. The majority of product is exported.

Mars Petcare exports via road to either Wellington Port or Napier.

Stock truck movements impact the most on the following sections of the road network (Hyder Consulting Ltd, 2010):

- SH1 north of Palmerston North
- SH3 and SH4 as key arterials in the Wanganui urban area

5.5 Pork

Pork is a relatively small sector in the Wanganui District, according to official statistics. In 2007, there were only six pig farms out of a total of 294 farms nationally. According to the 2010 BERL regional database, Wanganui had around three pig farms, generated around $2 million and employed around 18 FTEs. However, a discussion with NZ Pork suggested that there were around ½ a dozen piggeries.[2] This figure could be confirmed with a search of council consents for pig farms.

The largest pig farm in the Wanganui District is Aorere Farms Piggery, which has 450 breeding sows.

Total domestic pigkill in (nationally) 2009/10 was 694,000, a 0.5 percent increase from 2008/09. The total domestic production of pork for the 2009/10 meat year was 47,000 tonnes, 0.7 percent higher than the 46,800 tonnes produced in 2008/09.

Pigkill decreased by 6.6 percent in the North Island and increased by 5.1 percent in the South Island. The South Island killed 60.8 percent of the total up from 58.2 percent last year (NZ Pork, 2010).

Employment and GDP

Table 5.2 shows the contribution of the pork sector to the Wanganui District's economy in terms of GDP and Employment in 2010.

Table 5.2. Pork employment, GDP and businesses, Wanganui District, 2010

Pork	Total 2010	% of District	% of national Pork
Employment (FTEs)	18	0.1%	0.7%
GDP ($mn)	2	0.1%	0.7%
Business units	3	0.1%	1.0%

BERL Regional Database, 2010

In 2010, the pork sector directly employed 18 FTEs in the Wanganui District, contributing $2 million to the district's GDP, with 3 business units. This is a relatively small sector, both in terms of what it contributes to the district, and to the pork industry nationally.

Figure 5.3 shows the number of FTEs employed in the pork sector over the last seventeen years. Employment is limited to the production of pork, with processing included in the meat sector analysis.

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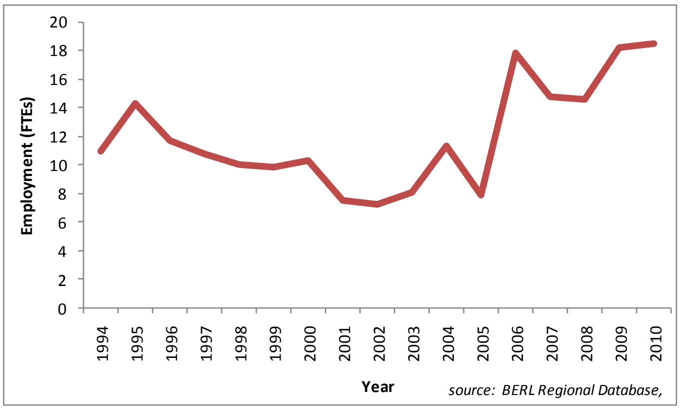
[2] The actual number of pig farms in Wanganui could be confirmed with a search of council consents for pig farms.

Figure 5.3. Pork employment, Wanganui District, 1994 - 2010



After declining steadily since 1994, employment in the pork industry started to climb from 2003. Note that this change in employment is off a very small base.

Location of activity and transport

There are around six pig farms spread around Wanganui. The major processor for pork in the Manawatu-Wanganui region is Land Meats, which is located in Bryce Street in Wanganui. Pigs are sent down from as far afield as Taranaki for processing. However, Land Meats also processes beef, lamb and goat. Activity from Land Meats is included in the meat sector analysis.

6 Wool

Wool is the second stream of income for sheep farmers in Wanganui. Wool is transported to the Hawkes Bay for scouring and then sent on for further processing within New Zealand or exported directly offshore.

In terms of processing, Cavalier Bremworth in Wanganui imports scoured wool from the Hawkes Bay scourers and makes them into carpet for the domestic and export markets.

6.1 Production

There were a total of 677,000 sheep in the Wanganui District in 2007, making up 10 percent of the Manawatu-Wanganui sheep population.

In the 2009-10 June year, total New Zealand production of wool (shorn greasy and slipe greasy) was 183,300 tonnes. This was based on a population of 32.6 million sheep. The Manawatu-Wanganui region has approximately 18 percent of all sheep in New Zealand, suggesting it sent around 3,140 tonnes of wool for processing.

There are also a number of shearing gangs in the Wanganui District. The BERL regional database 2010 identified nine businesses employing 59 FTEs in the shearing services industry.

6.2 Processing

The major wool processor in the Wanganui District is Cavalier Bremworth's spinning and dye mill.

Cavalier Bremworth scours the wool in Napier and then sends the wool to one of their two spinning and dye mills located in Napier and Wanganui. Wool coming from Wanganui goes by road to the Wanganui plant. The yarn is then sent to Cavalier Bremworth's tufting plant, by road, in Auckland. There are only two scouring operations in New Zealand, both of which are located in the Hawke's Bay. Therefore, all wool from the Wanganui District is transported by road to the scouring plants in the Hawke's Bay. As for wool coming back into and out of the Wanganui District, it is estimated that less than 2,000 tonnes comes back for processing from Napier.

6.3 Employment and GDP

Table 6.1 shows the contribution of the Wool sector to the Wanganui District's economy in terms of GDP and Employment in 2010.

Table 6.1. Wool employment, GDP and businesses, Wanganui District, 2010

Wool	Total 2010	% of District	% of national Wool
Employment (FTEs)	365	2.3%	1.7%
GDP ($mn)	35	1.7%	2.8%
Business units	109	2.7%	1.4%

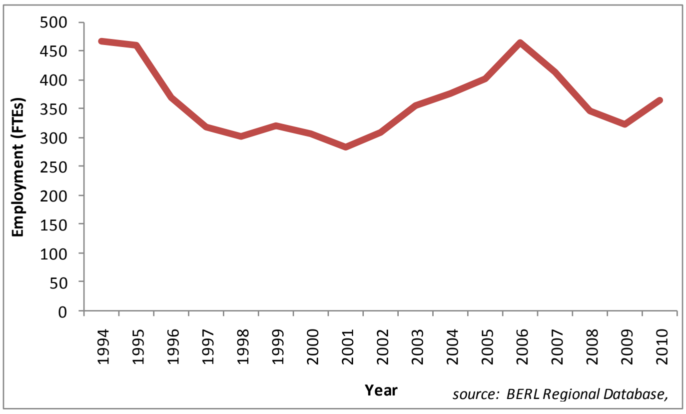
BERL Regional Database, 2010

In 2010, the wool sector directly employed 365 FTEs in the Wanganui District, contributing $35 million to the district's GDP. There are a large amount of business units (109) that are involved in the wool sector, contributing 2.7 percent of all business units in the district.

Nationally, the Wanganui District employs 1.7 percent of total FTEs involved in the wool sector, contributing 2.8 percent to GDP and providing 1.4 percent of all business units in New Zealand's wool industry.

Figure 6.1 shows the number of FTEs employed in the wool sector over the last seventeen years.

Figure 6.1. Wool employment, Wanganui District, 1994 - 2010



Employment in the wool sector in the Wanganui District fell between 2006 and 2009. This was seen nationally, as wool prices declined, and stock numbers were reduced due to either severe weather or financial constraints. However, over the last year, prices have risen due to increased demand internationally and there has been a recovery in employment.

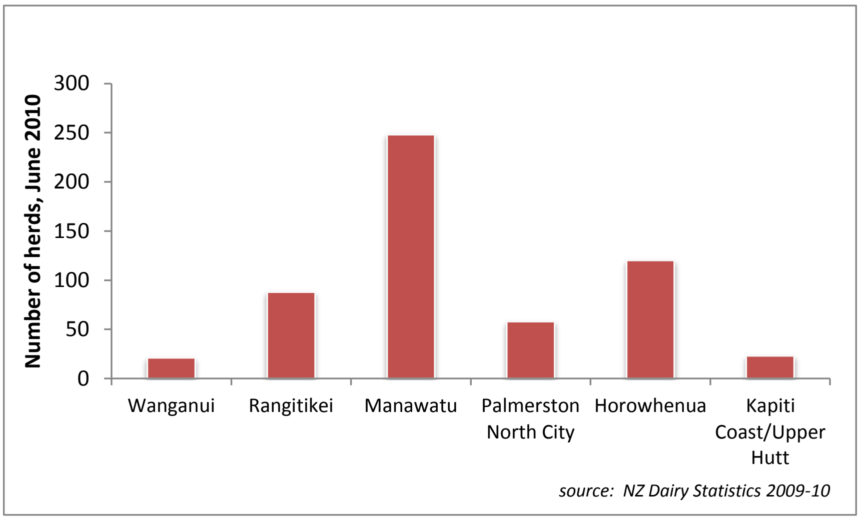
7 Dairy

Dairy in the Wanganui District is made up of dairy farming and dairy processing. There were a total of 21 herds in Wanganui District in 2010 (year ending 30 June) with around 8,250 cows. In total, dairy farming in the Wanganui District takes up 3,162 hectares (LIC, 2010).

7.1 Production

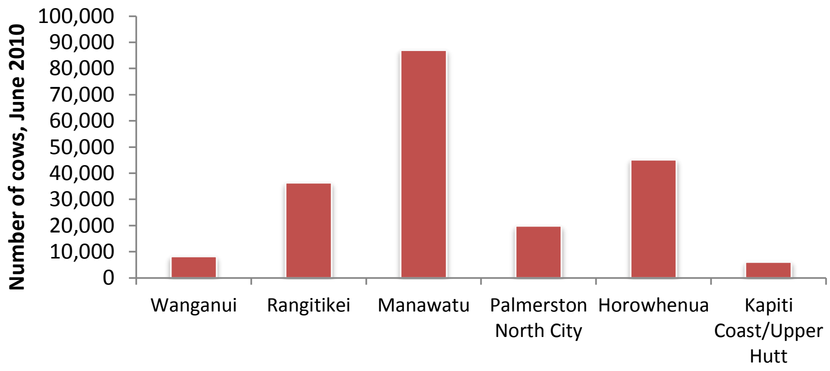
Dairy is a relatively small sector in Wanganui compared to the rest of the Manawatu region as shown in Figure 7.1.

Figure 7.1. Total dairy herds, Manawatu-Wanganui region, 2010



The Manawatu-Wanganui region accounts for around 4.6 percent of dairy cows, while the adjoining Taranaki region has the second largest dairy sector in the country accounting for 10.9 percent of all dairy cows in 2009/10 as shown in Figure 7.2.

Figure 7.2. Total cows in the Manawatu-Wanganui region, 2010

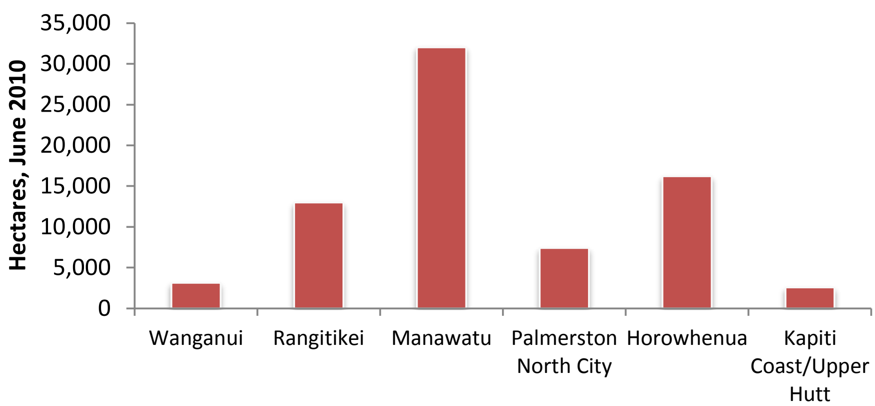


source: NZ Dairy Statistics 2009-10

Of the 21 herds in Wanganui in 2010, 17 were owner operated, with the remaining four being run by share milkers. The average dairy farm in Wanganui had 393 cows over 151 hectares of land, each producing 1.4 million litres annually.

Dairy production has been increasing in Wanganui, as it has throughout the country. Over the last ten years, the number of dairy cows in New Zealand has increased by close to 35 percent. In the 2009/10 year, the cow population increased by 3.4 percent to 4.4 million nationally. Over the same period, the number of cows in Wanganui increased by 6.6 percent. As well, land used for dairying has increased by 5.5 percent in the Wanganui District.

Figure 7.3. Total effective hectares land in dairy for Manawatu-Wanganui region



source: NZ Dairy Statistics 2009-10

Based on the average production per cow in the Manawatu-Wanganui region, it is estimated that the Wanganui dairy sector produced around 2.76 million kg of milk-solids in 2010. With the cash payout component of the Milk Price for 2009/10 being $6.37 per kg of milk-solids, the Wanganui dairy sector collected around $17.6 million in revenues.

7.2 Processing

Open Country Dairy Limited is a private company operating in New Zealand as a dairy ingredient manufacturer, processing milk into a range of milk powders, milk proteins, milk fats and cheeses that are used in a variety of applications including food, beverage and nutritional applications. Open Country branded products are exported to around 45 countries worldwide (Open Country).

Open Country operates a whole milk powder plant in Wanganui Township in the suburb of Gonville. The Wanganui site commenced operation on 1 August 2009, processing milk from 120 dairy farms. The Wanganui site has the capacity to process 220 million litres of milk per annum and produce 30,000 tonnes of products including regular, vitamin enriched and whole milk powders.

Due to Open Country's close proximity to local farms in Wanganui, it is expected that most Wanganui dairy farm output would go there. The Wanganui District has 21 herds, producing approximately 29 million litres of milk, whereas Open Country processed 171 million litres in 2010. Therefore, the Wanganui District provides less than 20 percent of the milk processed, with the majority being sourced from neighbouring districts.

7.3 Employment and GDP

Table 7.1 shows the contribution of the dairy sector to the Wanganui District's economy in terms of GDP and employment in 2010.

Table 7.1. Dairy employment, GDP and businesses, Wanganui District, 2010

Dairy	Total 2010	% of District	% of national Dairy
Employment (FTEs)	167	1.0%	0.3%
GDP ($mn)	18	0.9%	0.4%
Business units	56	1.4%	0.3%

BERL Regional Database, 2010

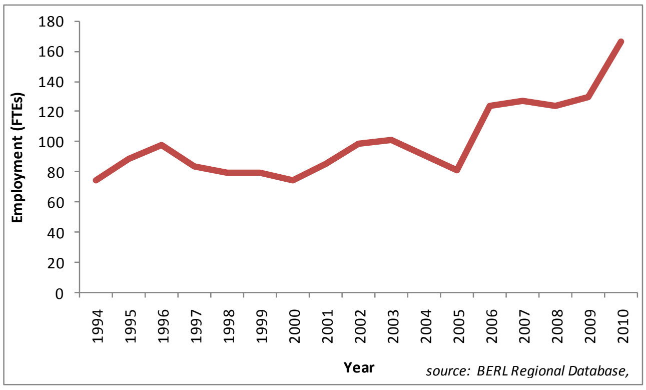
In 2010, the dairy sector directly employed 167 FTEs in the Wanganui District. The dairy sector provides a relatively small proportion of all employment (1.0 percent) in the district and contributes 0.9 percent to the district's GDP. There are approximately 56 businesses associated to the dairy sector in the Wanganui District, providing 1.4 percent of the district's total business units.

Despite the new processing plant, the Wanganui District is a small player in the dairy sector, contributing only 0.4 percent of the national dairy sector's total GDP.

There has been steady increase in employment in the dairy sector in Wanganui since 2000. With the arrival of Open Country's new processing plant in 2009, there has been another spike in dairying activity around the Wanganui District. GDP has increased by $6 million from 2009 to 2010, a rise of 46.7 percent.

Figure 7.4 shows the number of FTEs employed in the dairy sector over the last seventeen years.

Figure 7.4. Dairy FTE employment, Wanganui District, 1994 - 2010



The impact of Open Country's new processing plant built in 2009 in Wanganui can also be seen in the employment figures above. Employment between 2009 and 2010 has increased by 37 FTEs, an increase in employment of 28.3 percent.

7.4 Location of activity and transport

Open Country has milk tankers that cart approximately 171 million litres of milk annually to its processing plant in Wanganui of which around 29 million litres are collected within the district using local roads[3].

In 2010, around 22,000 tonnes of milk product was exported through New Plymouth port using the inland container terminal at the Castlecliff rail branch line. The inland container terminal is located near Open Country's dairy factory and milk powder storage facility.

[3] Assuming that all local dairy farms supply to Open Country.

8 Horticulture

Information on the district's horticulture sector is particularly difficult to identify, largely due to the availability of official data at meaningful levels of detail. District data comes from the BERL regional database combined with information gathered by the WDC.

New Zealand horticulture is a $5.2 billion industry. It is New Zealand's sixth largest sector, exporting 60 percent of production with a total value of $2.8 billion to more than 110 countries. It employs 50,000 people in eight key growing regions.

New Zealand's horticulture exports have grown from $100 million in 1980 to $2.2 billion in 2008. Total area used for horticulture crops is around 90,000 hectares (Horticulture New Zealand).

8.1 Fruit & Vegetables

8.1.1 Production

At a district level, data on the area planted in horticultural product is difficult to obtain for the Wanganui District due to most data being confidential. In 2007, there were 88 hectares of green kiwifruit growing in the Wanganui District, 20 hectares in pears and 10 hectares in olives. There was no information available on vegetables.

With 88 hectares of green kiwifruit, it is estimated that 2,600 tonnes a year of kiwifruit, 0.7 percent of New Zealand's total production.

Around half of the production in the Wanganui District is located in Wanganui East, Papaiti and Mangamahu.

A database collated by WDC officials identifies 46 fruit, vegetable and crop growers in the district. Twelve of these are kiwifruit growers, ten are pear growers, and 15 are croppers growing wheat, grain and maize. Four vegetable growers were identified along with a further pip-fruit and berry orchard.

8.1.2 Processing

There is a kiwifruit packing store in Wanganui East (Cooper Coolpak), which can employ upwards of 120 staff, including pickers, packers and experienced graders.

8.1.3 Employment and GDP

Table 8.1 shows the contribution of the fruit and vegetable sector to the Wanganui District's economy in terms of GDP and employment in 2010.

Table 8.1. Fruit & Vegetable employment, GDP and businesses, Wanganui District, 2010

Hort (fruit & veg)	Total 2010	% of District	% of national Hort (fruit & veg)
Employment (FTEs)	219	1.4%	0.5%
GDP ($mn)	23	1.1%	0.6%
Business units	50	1.2%	0.4%

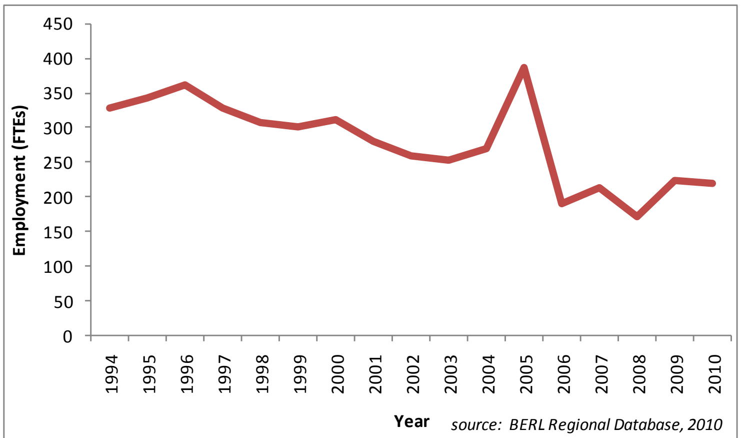
BERL Regional Database, 2010

In 2010, the fruit and vegetable sector directly employed 219 FTEs in the Wanganui District, contributing $23 million to the district's GDP. There are only a small number of businesses, 50 business units, involved in the fruit and vegetable sector in the Wanganui District.

Nationally, the Wanganui District employs 0.5 percent of total FTEs involved in the Fruit and Vegetable sector, contributing 0.6 percent to GDP and providing 0.4 percent of all business units in New Zealand's Fruit and Vegetable industry.

Figure 6.1 shows the number of FTEs employed in the Fruit and Vegetable sector over the last seventeen years.

Figure 8.1. Fruit & Vegetables employment, Wanganui District, 1994 - 2010



source: BERL Regional Database, 2010

In 2005 there was a sharp decline in employment in the Fruit and Vegetable sector for the Wanganui District from which it has not recovered.

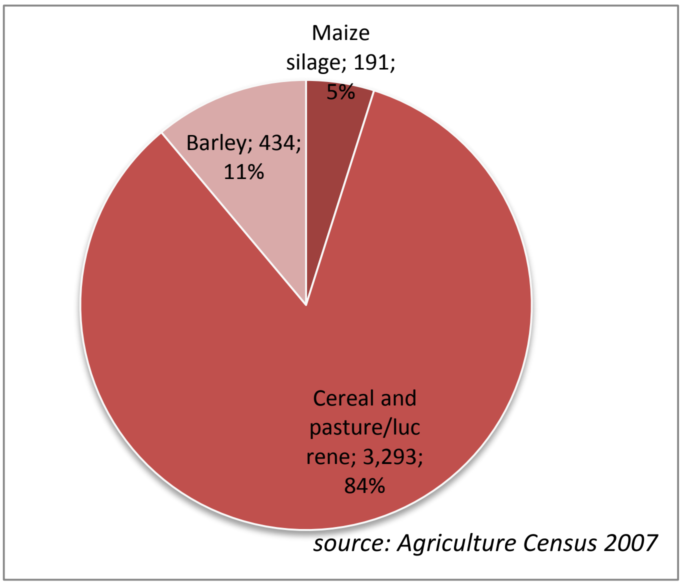
8.2 Cropping

Cropping consists of hay, silage, baleage, wheat, barley, oats, other cereal grains and maize grain.

8.2.1 Production

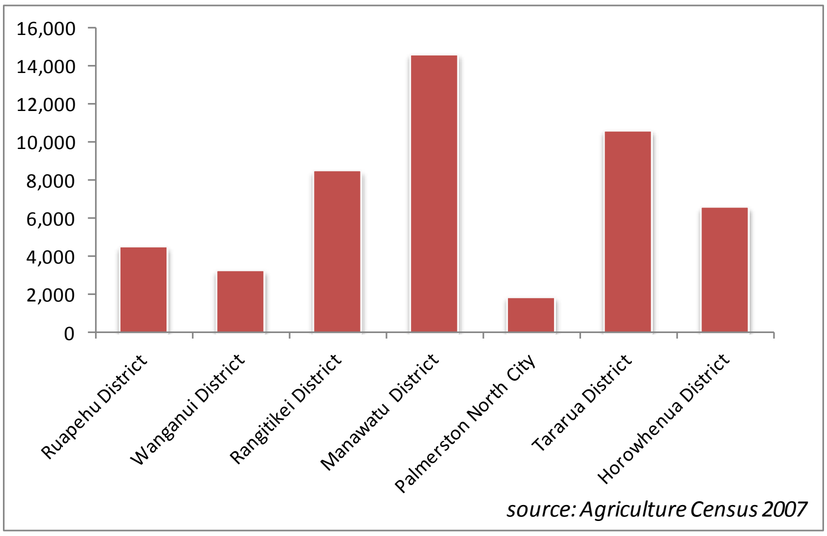
The major crop for the Wanganui District is cereal and pasture/Lucrene, having around 3,300 harvestable hectares in 2007. Barley is the second most important crop with 424 hectares producing 2,510 tonnes annually. Most of the information available for cropping was confidential in official statistics. Therefore it is unknown how many hectares in the Wanganui District is in wheat and oats.

Figure 8.2. Crop hectares harvested, Wanganui District, 2007



Compared to other districts within the Manawatu-Wanganui region, the Wanganui District has seven percent of the Manawatu-Wanganui region's hectares of harvestable cereal and pasture/lucrene.

Figure 8.3. Effective hectares harvested in cereal and pasture/lucrene, Manawatu-Wanganui region, 2007



8.2.2 Processing

No information was provided on where cereal and pasture/lucrene is processed. It could be assumed that as most of this would be used as feed stock for cattle and dairy, that the majority is processed on farm.

8.2.3 Employment and GDP

Table 8.2 shows the contribution of the cropping sector to the Wanganui District's economy in terms of GDP and employment in 2010.

Table 8.2. Cropping employment, GDP and businesses, Wanganui District, 2010

Hort (cropping)	Total 2010	% of District	% of national Hort (cropping)
Employment (FTEs)	124	0.8%	0.9%
GDP ($mn)	19	0.9%	1.5%
Business units	17	0.4%	0.7%

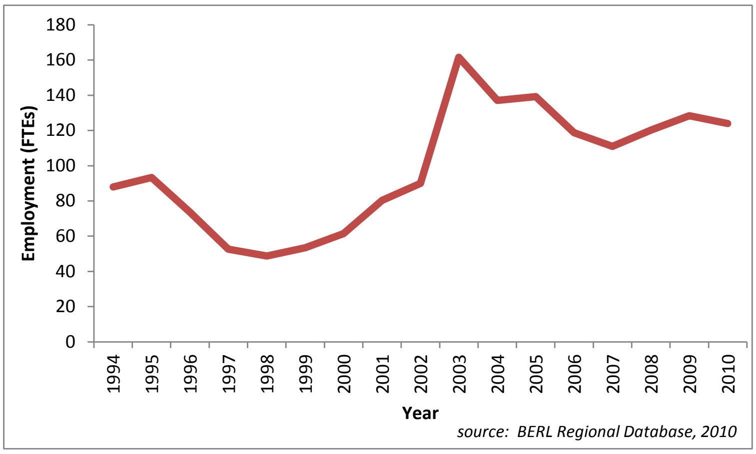
BERL Regional Database, 2010

In 2010, the cropping sector directly employed 124 FTEs in the Wanganui District, contributing $19 million to the district's GDP. There are only a small number of businesses, 17 business units, involved in the cropping sector in the Wanganui District.

Nationally, the Wanganui District employs 0.9 percent of total FTEs involved in the cropping sector, contributing 1.5 percent to GDP and providing 0.7 percent of all business units in New Zealand's cropping industry.

Figure 8.4 shows the number of FTEs employed in the cropping sector over the last seventeen years.

Figure 8.4. Cropping employment, Wanganui District, 1994 - 2010



Employment in the cropping sector had steady growth from 1998 to 2004 where it reached its highest employment of 161 FTEs in 2003 for the district. Since then, employment in cropping has come down and settled at around 120 FTEs.

8.2.4 Location of activity and transport

At least half of the kiwifruit production in Wanganui is located in Wanganui East, Papaiti and Mangamahu.

Cooper Coolpak is located in Wanganui East. The packed kiwifruit is transported by road to Tauranga where it is exported directly. Other smaller growers transport fruit directly to Tauranga where it is packed for export.

There is some production of berries and avocado in the Wanganui District. However, production levels are small compared to the overall estimate for these industries. It is likely that if these products are exported, they will be done so by road.

9 Transport System in Wanganui

Transportation of commodities is generally completed via road or rail. More time critical commodities are transported by road (Hyder Consulting Ltd, 2010). Commodities that are railed are grouped together to reduce transportation costs, and then railed to Taranaki, Wellington or Tauranga for export.

9.1 Roading

9.1.1 Local Roads

The WDC provides a road network that has an all-weather surface capable of carrying both light and heavy vehicles. The district has 220km of urban roads and 615 km of rural roads, including 74 bridges.

Almost all of the 220 km of urban road is sealed (219km or 99 percent), whereas only 51 percent or 314 km of rural roads are sealed. Approximately 94 percent of urban sealed roads have kerb and channel both sides. Sealed road roughness is kept below the point that causes high vehicle wear.

Most road maintenance activity is paid 38 percent by the ratepayer and 62 percent by Land Transport New Zealand (central government agency). Other roading activity is paid 28 percent/72 percent (Wanganui District Council, 2011).

The Ministry of Transport states that local roads in Wanganui total 850km in 2008/09, slightly higher than the WDC estimate of 835km.

9.1.2 State Highways

Wanganui is at the intersection of two state highways – SH3 and SH4.

State Highway 3 runs north-south, providing access to the West coast of the North Island. It originates in Palmerston North to the south and runs north-west through Wanganui to Hawera and up to New Plymouth. It then continues through to Te Kuiti and then ends in Hamilton.

State Highway 4 also runs north-south. It begins in Wanganui, diverting north from SH3 and heading up the Wanganui River. SH4 goes past Ohakune, National Park and Taumaranui, and rejoins SH3 just before Te Kuiti.

9.2 Ports

The majority of primary produce is exported via ports. The major export ports are New Plymouth to the West, Tauranga to the North East, and Wellington to the South. While there is a port in Wanganui, it is not an export port. However, there is some coastal shipping in and out of Port Wanganui.

In 2009, 17,600 tonnes of goods went through the port and there were 32 port assisted movements in the 2009/10 year.

9.3 Rail

The Marton – New Plymouth Line runs through Wanganui, which has a container transfer site at Taupo Quay. There are ten services during the week (one each way), with the container terminal site open on weekdays.

Extended rail freight services between Wanganui and Castlecliff (Open Country) have recently been reinstated. Initial plans are to run four trains daily on weekdays, which will then increase to seven days a week with additional services as demand requires.

The inland port facility in Wanganui is still in its early days of operation. Although it provides a facility to allow commodities to be grouped and packaged together to be sent to Tauranga, demand for rail access is dependent on the availability of ships leaving from that location. Combined with the price competitiveness of road transport, for a number of commodities, road transport is the preferred option.

There is currently a proposal from CentrePort to transport logs and processed timber products from Masterton, Marton and Wanganui by rail rather than road for export at Wellington's Centre Port. If this proposal is approved, log yards would be created at the railway stations of the three North Island towns. This would relieve pressure on the SH1 road network between Sanson and Wellington, allowing commodities to be transported more efficiently in the North Island. This proposal will not alleviate the impacts of logging and forestry on local roads. However, it will see an increase of logging trucks into Wanganui to the local depot.[4]

9.4 Airport

The airport is a Joint Venture (JV) Airport, owned in equal partnership by the WDC and the NZ Government through the Ministry of Transport, and is managed by the Wanganui Airport

[4] We note that this proposal has been in train since 2004 and so whether and when it proceeds is uncertain.

Authority, a business unit of the WDC. The airport consists of one sealed runway and four grass runways, a sealed apron, a large grassed apron/aircraft park, fuel services, a passenger terminal and private maintenance facilities and hangers.

Operations from the airport include scheduled airlines, airline charter and air ambulance, fixed and rotary wing agricultural flying, military flying training and operations, and both fixed wing and rotary wing training.

Eagle Air operates four daily return flights to Auckland from Sunday to Friday and three return services to Auckland on Saturday. One return service to Wellington is operated each day Monday to Friday with the Monday outbound service originating at Taupo and the Friday service from Wellington returning back to that location.

Wanganui is also a regular diversion for airlines using New Plymouth when this airport is closed to routine operations (Wanganui Airport Authority, 2011).

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11 Consultation

The following people/organisations were contacted to obtain further information about the movements of freight in the Key Sectors:

- Paul Chapman, Depot Manager at Fonterra Whareroa Processing Plant
- Daryl Hoskins from Dave Hoskins Carriers
- Tamsyn, Cavalier Bremworth
- Hawke's Bay Wool Scourers
- Martin Inness, Mars Petcare New Zealand
- John Fitness, Land Meats New Zealand Limited
- Steven Smith, Eastown Timber Processing Limited
- Steve Couper, Ernslaw One, SNI Regional Manager