

Number and density of livestock in New Zealand

HIGHLIGHTS:

- Livestock have a major effect on the environment, which can impact human health.
- Total livestock decreased by almost 1.5 million between 2015 (40 million) and 2016 (38.6 million).
- Total livestock decreased by a quarter between 2002 (51 million) and 2016 (38.6 million).
- In 2016, Manawatu-Wanganui had the highest livestock density (277 animals per km²) among all regions in New Zealand.



Source: MfE & Statistics New Zealand, 2015

Agricultural use of the land has a major effect on the environment

Animals such as cattle, sheep and deer, which are farmed for agricultural purposes have a very important role in the New Zealand economy. However, this agricultural use of the land can have a major effect on the environment. Rivers, lakes and coastal waters that are used for recreational activities such as swimming, boating and fishing can become contaminated. Water that is contaminated can pose risks to human health and impact on our ability to use these waters. For example (MfE & Statistics New Zealand, 2015):

- The run-off of effluent into water sources can affect water quality and cause gastrointestinal or respiratory diseases
- Excess nutrients, such as nitrogen from fertiliser or livestock urine, can be washed into waterways and pose a negative impact on the water quality.
- Intensive farming consumes large amounts of water for irrigation and as stock water, which affects the water levels in rivers and groundwater supplies.
- Additionally, agriculture is a large contributor of greenhouse gas emissions. The methane (CH₄) produced by dairy cattle and sheep can contribute to climate change.

Table 1: Number of livestock by type in New Zealand, 2015-2016

Livestock Type	Number of Livestock (million)		2015-2016 change (%)	
	2015*	2016*		
Sheep	29.1	27.6	-5.3	↓
Dairy cattle	6.5	6.6	2.1	↑
Beef cattle	3.5	3.5	-0.4	↓
Deer	0.9	0.8	-7.3	↓
Total	40.0	38.6	-3.7	↓

Source: Statistics New Zealand, 2017

* year to 30 June

Total livestock decreased by almost 1.5 million between 2015 and 2016

In 2016, there were around 38.6 million livestock (including sheep, dairy cattle, beef cattle and deer) in New Zealand (Table 1). Sheep were the predominant group, accounting for almost 72% of total livestock. Compared to 2015, the total number of livestock decreased by almost 4% (1.5 million).

The largest decrease was in the number of deer, which were reduced by over 7% to approximately 0.8 million.

After a decrease in dairy cattle numbers in 2015, the number increased by 2% to 6.6 million.

Sheep numbers were down by over 5% from the previous year, to 27.6 million.

The number of beef cattle remained relatively stable, at 3.5 million.

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Total livestock decreased by almost a quarter between 2002 and 2016

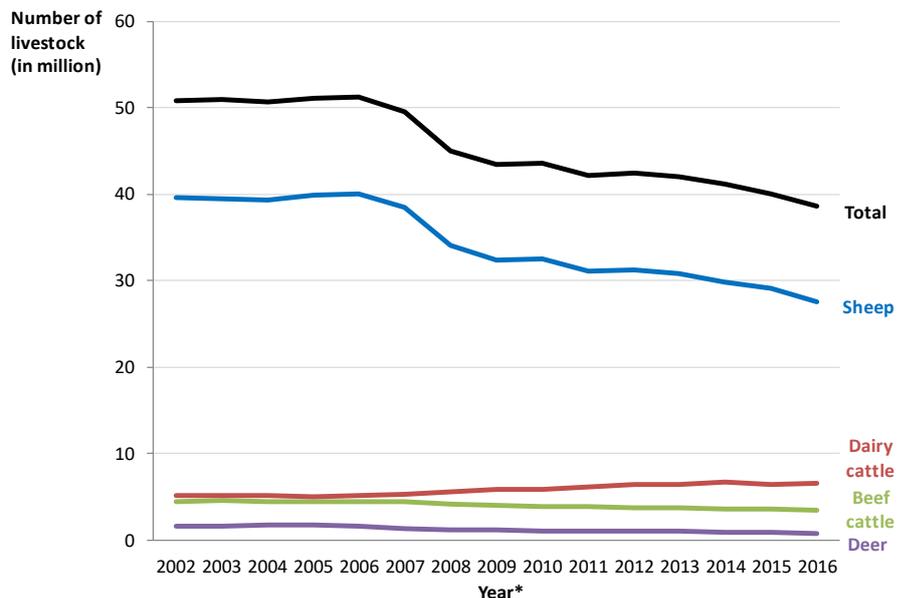
Between 2002 and 2016, the number of total livestock in New Zealand decreased by 24%, from 50.9 million to 38.6 million (Figure 1).

In this time frame, the number of sheep was reduced by almost one third, from 39.6 million to 27.6 million.

In contrast, the number of dairy cattle increased by over one quarter, from 5.2 million to 6.6 million.

The number of deer was continuously decreasing since 2004, when it peaked at 1.8 million and almost halved between 2002 and 2016.

Figure 1: Number of livestock by type in New Zealand, 2002-2016*



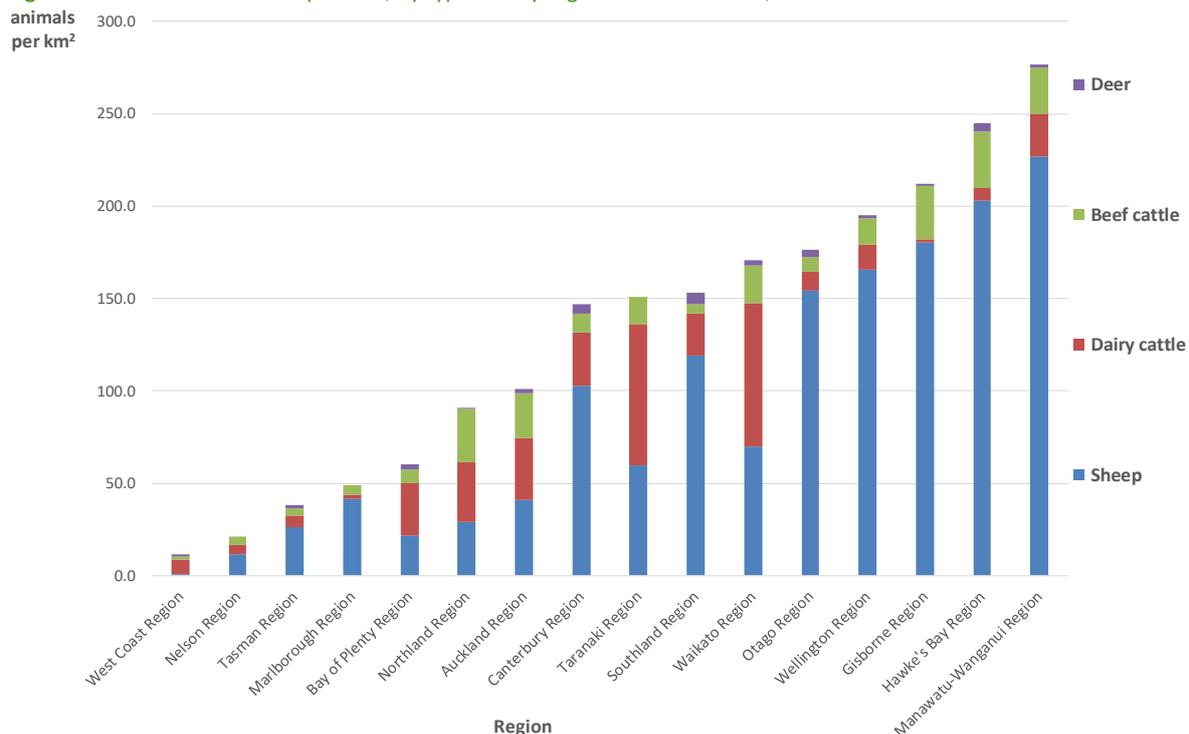
Source: Statistics New Zealand, 2017
*year to 30 June

Note: 2002, 2007 and 2012 data based on Agricultural Census. 2003-2006, 2008-2010, 2013-2016 data based on Agricultural Production Survey

Livestock density by region

In 2016, Manawatu-Wanganui had the densest livestock (277 animals per km²) among all regions in New Zealand (Statistics New Zealand, 2017). It also had the highest density of sheep (227 animals per km²). For other types of livestock, the densest numbers of dairy cattle were located in Waikato Region (78 animals per km²), beef cattle in Hawke's Bay Region (31 animals per km²) and deer in Southland Region (6 animals per km²) (Figure 2).

Figure 2: Number of livestock per km², by type and by region in New Zealand, 2016*



Source: Statistics New Zealand, 2017
* year to 30 June

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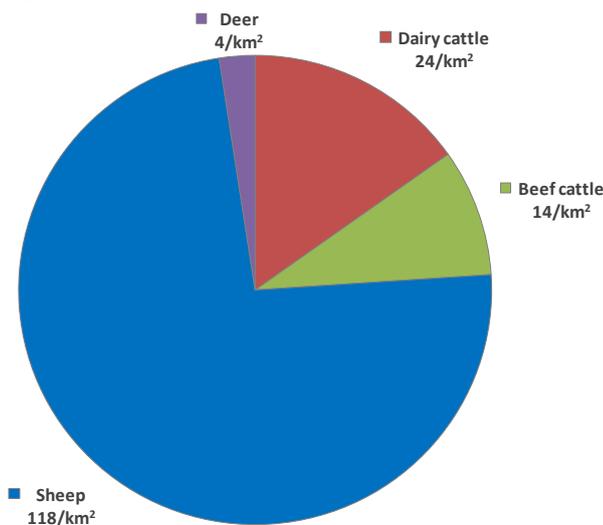
Livestock density by Territorial Authority (TA)

In 2012, New Zealand had an average livestock density of 160 animals per km² (Statistics New Zealand, 2013). Sheep were the predominant livestock type - with an average density of 118 animals per km² (Figure 3).

At the TA level in 2012, Gore District had the densest total livestock (724 animals per km²), followed by Central Hawke's Bay District (485 animals per km²), Tararua District (414 animals per km²) and Masterton District (404 animals per km²) (Figure 4).

Timaru District had the highest density of deer (24 animals per km²), Gore District had the highest density of sheep (632 animals per km²), Central Hawke's Bay District had the highest density of beef cattle (51 animals per km²) and Matamata-Piako District had the highest number of dairy cattle (208 animals per km²).

Figure 3: Number of livestock per km² in New Zealand, by type, 2012*

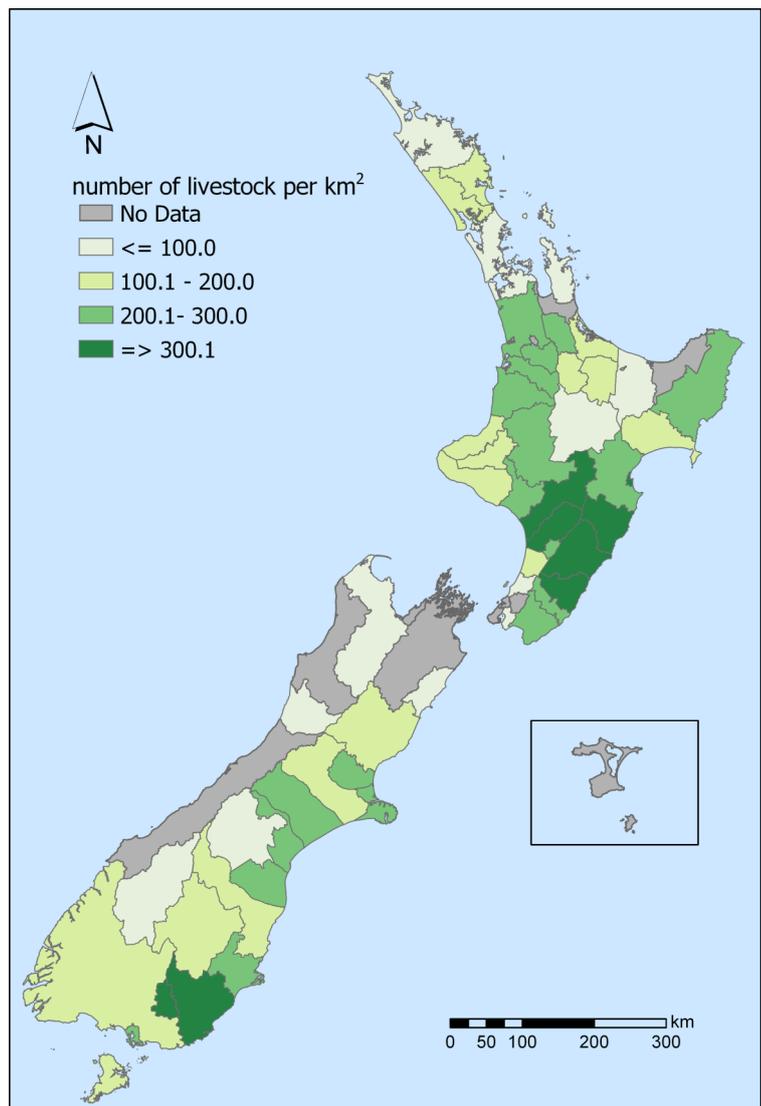


* The following territorial authorities had livestock data that was reported as confidential or suppressed by Statistics New Zealand: Buller District, Chatham Islands, Hamilton City, Hauraki District, Kawerau District, Marlborough District, Nelson City, Opotiki District, Porirua District, Tauranga City, Upper Hutt City, Wellington City, Westland District

* year to 30 June

Source: Statistics New Zealand, 2013

Figure 4: Number of livestock per km², by TA, 2012*



REFERENCES

Ministry for the Environment & Statistics New Zealand. (2015). *New Zealand's Environmental Reporting Series: Environment Aotearoa 2015*. Available from www.mfe.govt.nz and www.stats.govt.nz (accessed July 2017).

Statistics New Zealand. (2017). *Agricultural Production Statistics: June 2016 (final)*. Data available from <http://nzdotstat.stats.govt.nz/wbos/index.aspx> (accessed July 2017).

Statistics New Zealand. (2013). 2012 Agricultural Census tables. Data available from http://stats.govt.nz/browse_for_stats/industry_sectors/agriculture-horticulture-forestry/2012-agricultural-census-tables.aspx (accessed July 2017).

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