# Number and density of livestock in New Zealand

This factsheet presents indicators of the number and density of livestock (sheep, dairy cattle, beef cattle, deer) in New Zealand. Livestock play an important role in the New Zealand economy. But poorly managed livestock production can have a major impact on the environment.

### **Key facts**



Livestock have a major effect on the environment, which can impact human health.



Total livestock numbers decreased by a quarter between 2002 (51 million) and 2018 (38.3 million), however dairy cattle numbers have increased almost 25% (5.2 million in 2002, to 6.4 million in 2018).



Manawatu-Wanganui had the highest livestock density (277 animals per km²) among all regions in New Zealand in 2018.

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

Cattle, sheep and deer farming plays a very important role in New Zealand's 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 which poses a risk to human health and impacts our ability to use these waters (Ministry for the Environment & Statistics New Zealand 2015):

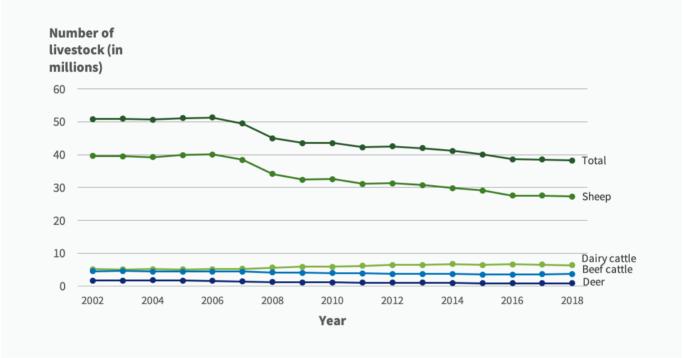
- The run-off of effluent from farms into water sources can affect water quality and cause gastrointestinal or respiratory diseases
- Excess nutrients, such as nitrogen from fertiliser or livestock urine, can be washed into waterways and pose a negative impact on the water quality.
- Intensive farming 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 (CH<sub>4</sub>) produced by dairy cattle and sheep contributes to climate change.

### Total livestock decreased by almost a quarter between 2002 and 2018

Between 2002 and 2018, the total number of livestock in New Zealand decreased by almost 25%, from 50.9 million to 38.3 million (Figure 1). The number of sheep was reduced by one third, from 39.6 million to 27.3 million. In contrast, the number of dairy cattle increased by almost one quarter, from 5.2 million to 6.4 million. The number of deer has continuously decreased since 2004, halving in numbers from 1.8 million in 2004 to 0.8 million in 2018.

Figure 1: Number of livestock, by type, 2002—2018\*



\*Year to 30 June

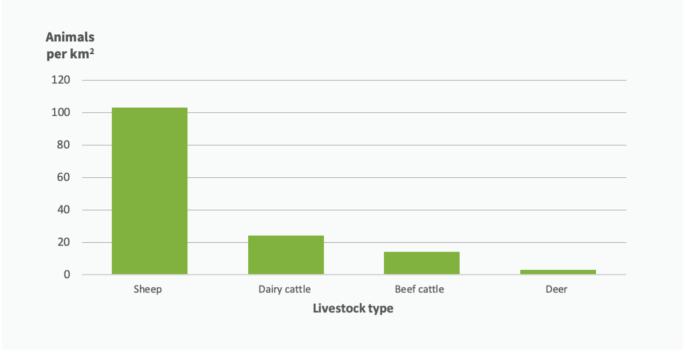
**Notes:** 2002, 2007, 2012, 2017, and 2018 data is based on the Agricultural Census. 2003—2006, 2008—2010, 2013—2016 is based on Agricultural Production Survey.

Data for numbers of deer are not comparable prior to 2004. For more information, see the Metadata sheet.

## Sheep were the predominant livestock type in 2018

In 2018, New Zealand had an overall livestock density of 144.4 animals per km<sup>2</sup>. Sheep were the predominant livestock type, with an overall density of 103.0 animals per km<sup>2</sup> (Figure 2).

Figure 2: Livestock density, by type, 2018\* (number per km²)



\*Year to 30 June

Notes: 2002, 2007, 2012, 2017, and 2018 data is based on the Agricultural Census. 2003—2006, 2008—2010, 2013—2016 is based on Agricultural Production Survey.

### Manawatu-Wanganui had the highest livestock density in 2018

In 2018, Manawatu-Wanganui had the densest total livestock (277.0 animals per km²) of all regions in New Zealand. It also had the highest density of sheep (227.7 animals per km²). For other types of livestock, the densest numbers of dairy cattle were located in Waikato Region (75.9 animals per km²), beef cattle in Northland Region (32.0 animals per km²) and deer in Southland Region (5.9 animals per km²) (Figure 3).

Animals per km2

Sheep Dairy cattle Beef cattle Deer

300

250

200

150

100

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Figure 3: Livestock density, by type and region, 2018\* (number per km²)

\*Year to 30 June

**Notes:** 2002, 2007, 2012, 2017, and 2018 data is based on the Agricultural Census. 2003—2006, 2008—2010, 2013—2016 is based on Agricultural Production Survey.

## Livestock density by territorial authority (TA)

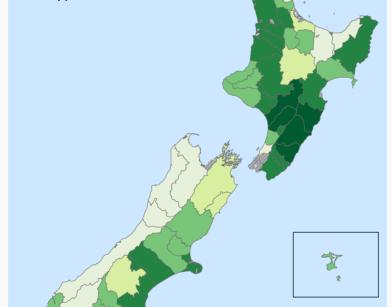
Clusters of TAs with high livestock density (>300 livestock per km<sup>2</sup>) were seen at the bottom of both the North and South Islands in 2017 (Figure 4).

Gore had the densest total livestock (684.5 animals per km<sup>2</sup>), followed by Central Hawke's Bay District (391.3 animals per km<sup>2</sup>), Masterton District (390.6 animals per km<sup>2</sup>) and Invercargill City (383.7 animals per km<sup>2</sup>).

Timaru District had the highest density of deer (21.7 animals per km<sup>2</sup>), Gore District had the highest density of sheep (589.8 animals per km<sup>2</sup>), Central Hawke's Bay District had the highest density of beef cattle (42.6 animals per km<sup>2</sup>) and Matamata-Piako District had the highest number of dairy cattle (211.1 animals per km<sup>2</sup>).

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Figure 4: Livestock density, by Territorial Authority, 2017\* (number per km²)



\*Year to 30 June

Notes: 2002, 2007, 2012, 2017, and 2018 data is based on the Agricultural Census. 2003—2006, 2008—2010, 2013—2016 is based on Agricultural Production Survey.

#### Data for this indicator

Data comes from Statistics New Zealand's *Agricultural Production Statistics* which contain the results of the Agricultural Production Censuses and Agricultural Production Surveys conducted from the year 2002 onwards. For additional information, see the metadata link below.

#### References

Ministry for the Environment (MfE) & Statistics New Zealand. 2015. *New Zealand's Environmental Reporting Series:* Environment Aotearoa 2015. Available from <a href="https://www.mfe.govt.nz">www.mfe.govt.nz</a> and <a href="https://www.stats.govt.nz">www.stats.govt.nz</a> (accessed July 2017).

Statistics New Zealand. 2019. *Agricultural production statistics: June 2018 (final)*. Data available from <a href="https://www.stats.govt.nz/information-releases/agricultural-production-statistics-june-2017-final-nz-stat-tables">https://www.stats.govt.nz/information-releases/agricultural-production-statistics-june-2017-final-nz-stat-tables</a> (accessed June 2019).

### Other recreational water topics include:

- Livestock
- Suitability for swimming
- Water-borne diseases related to recreational water

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