Number and density of livestock in New Zealand

This factsheet presents indicators of the number and density of livestock (sheep, dairy cattle, beef cattle and deer) in New Zealand. Livestock plays an important role in New Zealand's economy, though poorly managed livestock production can significantly impact the environment.

Key facts

Overall livestock numbers declined by more than a quarter between 2002–2020. Dairy cattle were the only livestock type whose numbers increased during this period.

Though sheep numbers decreased by one third between 2002–2020, sheep still outnumbered all other livestock types combined by a factor of almost three to one as of 2020.

The Manawatū-Whanganui region had the greatest concentration of livestock, possessing 403.2 animals per square kilometre of farmland in 2020.

Agricultural activity has a major effect on the environment

Agricultural use of land can cause bodies of water that are used for recreational activities (such as swimming, boating, and fishing) to become contaminated in several ways (Ministry for the Environment & Statistics New Zealand 2015):

- The run-off of effluent from farms into water sources can affect water quality by introducing pathogens that cause gastrointestinal or respiratory diseases.
- Excess nutrients, such as nitrogen from fertiliser or livestock urine, can be washed into waterways and reduce water quality by promoting the growth of potentially toxic algae.
- Intensive farming consumes large amounts of water for irrigation and as stock water, which may affect the water levels in rivers, interrupting river flow and preventing contaminants from being 'flushed' out of a waterway.

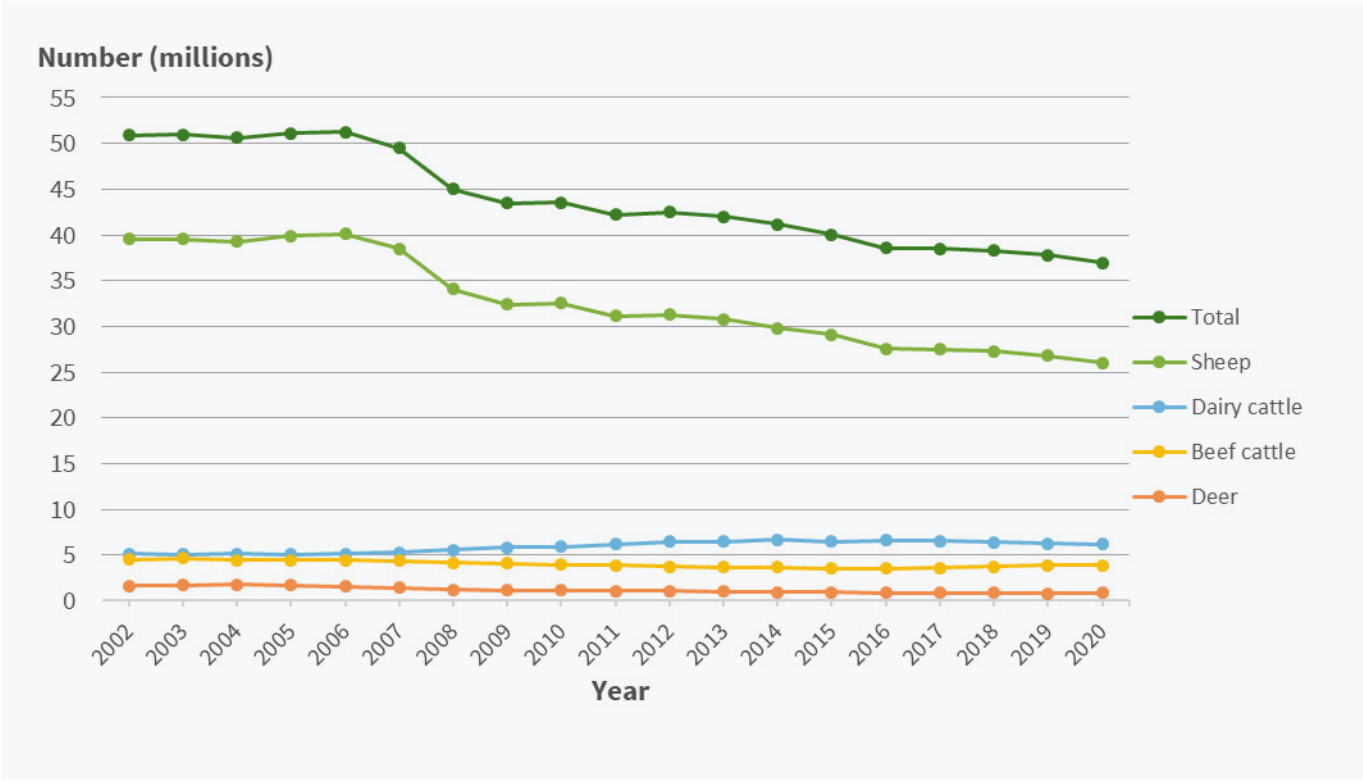
Additionally, agriculture is a notable contributor to greenhouse gas emissions. The methane (CH_4) produced by dairy cattle and sheep constitutes approximately a third of New Zealand's greenhouse gas emissions, making it the largest source of emissions in the country (Landcare Research 2020).

Total livestock numbers continued to decrease

Between 2002 and 2020, the number of stock animals in New Zealand decreased by 27.4%, from 50.9 million to 36.9 million (Figure 1). The bulk of the decline relates to decreasing sheep numbers, which reduced by just over a third (34.2%) during this period. Despite the reduction, sheep still outnumbered all other livestock types combined by a factor of nearly three to one as of 2020.

Deer numbers also declined markedly, with a 49.5% decrease between 2002–2020. The number of beef cattle also decreased by 13.5%. However, dairy cattle numbers increased by 20.1%, with most of the expansion concentrated in the South Island, where the number of dairy cattle rose by 91.2%.

Figure 1: Livestock numbers, by type, 2002–2020



Source: Statistics New Zealand 2021

Table 1: Livestock numbers by type, 2002 and 2020

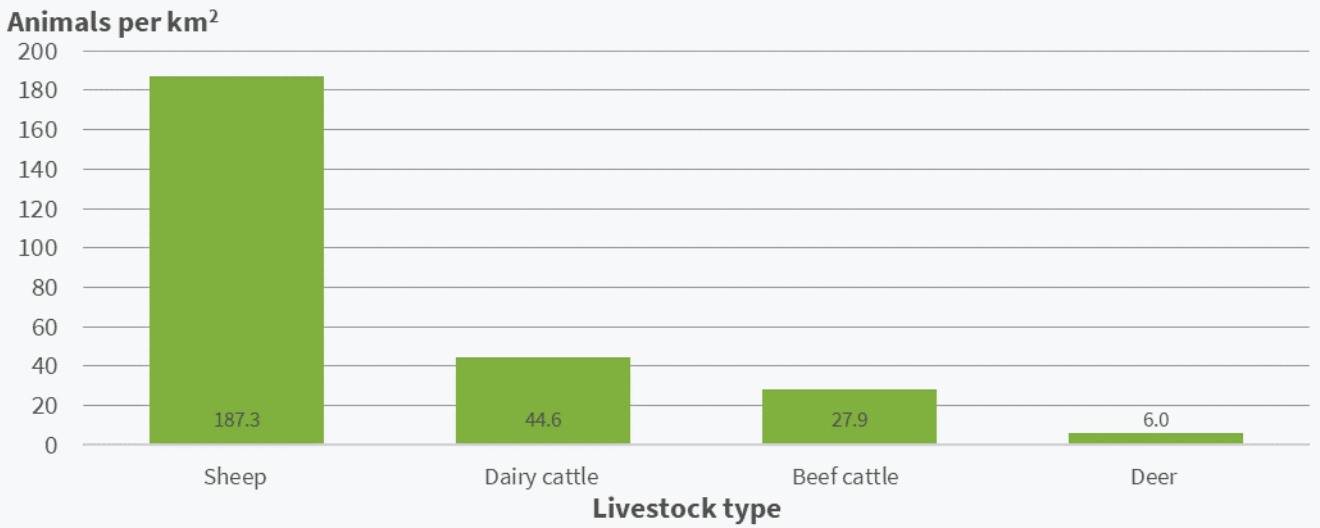
Livestock type	2002 (millions)	2020 (millions)	Percent change
Sheep	39.6	26.0	−34.2%
Dairy cattle	5.2	6.2	+20.1%
Beef cattle	4.5	3.9	−13.5%
Deer	1.6	0.8	−49.5%
Total	**50.9**	**36.9**	**−27.4%**

Source: Statistics New Zealand 2021

Sheep remained the primary livestock animal in 2020

In 2020, the nationwide density of livestock was 265.8 animals per km^2 of farming land. Sheep were the predominant stock animal, with an overall density of 187.3 animals per km^2, approximately four times that of the next most common animal—dairy cattle, with 44.6 animals per km^2 (Figure 2).

Figure 2: Density of livestock, by type, 2020

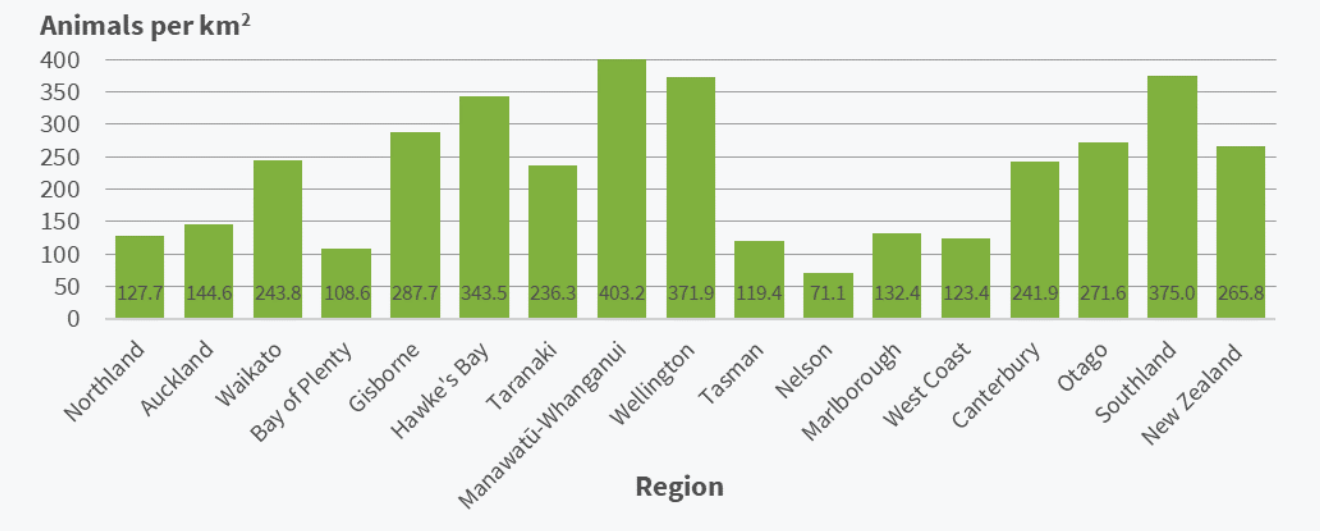


Note: Density is calculated based on the total area of farmland in a region, as listed in the 2017 Agricultural Census, not the area of farmland used explicitly for stock grazing.
Source: Statistics New Zealand 2021

The Manawatū-Whanganui region had the densest concentration of livestock

In 2020, the Manawatū-Whanganui region had the densest concentration of livestock (403.2 animals per km^2) nationwide (Figure 3).

Figure 3: Livestock density by region, 2020



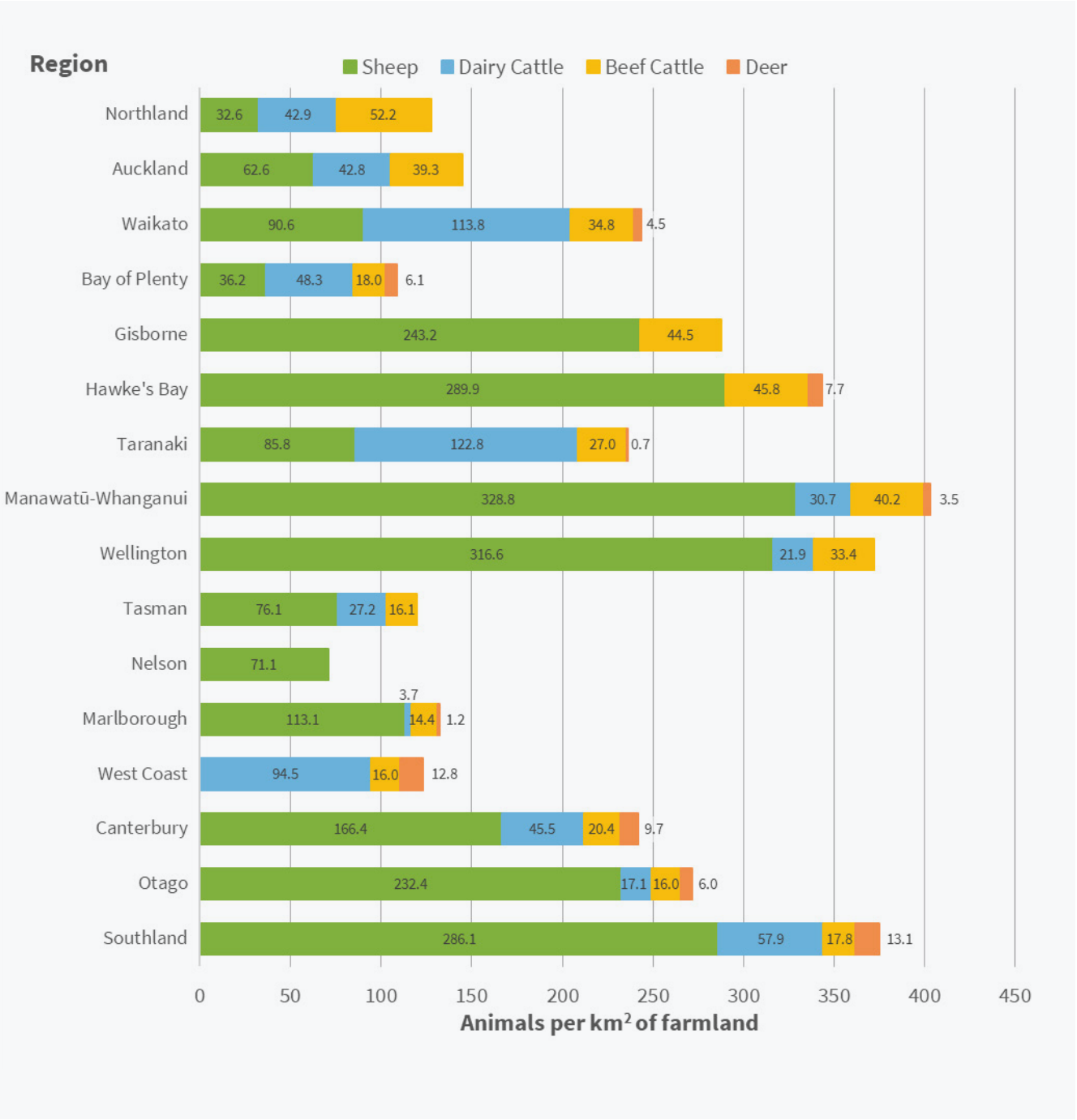
Note: Density is calculated based on the total area of farmland in a region, as listed in the 2017 Agricultural Census, not the area of farmland used explicitly for stock grazing.
Source: Statistics New Zealand 2021

As well as having the greatest density of livestock overall, the Manawatū-Whanganui region also had the highest density of sheep: 328.8 animals per square kilometre of farmland.

As for other types of livestock (Figure 4):

- The greatest concentration of dairy cattle was in Taranaki (122.8 per km^2)
- Beef cattle were most densely farmed in the Northland region (52.2 per km^2)
- Deer were densest in the Southland region (13.1 per km^2)

Figure 4: Livestock density by region, 2020



Note: Density is calculated based on the total area of farmland in a region, as listed in the 2017 Agricultural Census, not the area of farmland used explicitly for stock grazing.
Source: Statistics New Zealand 2021

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

Landcare Research. 2020. *Methane Emissions.* **www.landcareresearch.co.nz/science/greenhouse-gases/agricultural-greenhouse-gases/methane-emissions** (accessed May 2020).

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Statistics New Zealand. 2021. *Agricultural production statistics: June 2020 (final).* Data available from **www.stats.govt.nz/information-releases/agricultural-production-statistics-june-2020-final** (accessed June 2021).

Other related topics include:

Water-borne diseases related to recreational water

Agricultural land use

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Further information

For descriptive information about the data **Metadata Sheet**

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