



# The impacts of Cyclones Hale and Gabrielle on sheep and beef farms

An analysis by Beef + Lamb New Zealand

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## 1. Summary

B+LNZ estimates that the direct on-farm impacts of Cyclones Hale, Gabrielle and the Auckland Anniversary flooding on sheep and beef farms in the North Island (Northland, BOP, East Coast, Hawke's Bay, Wairarapa) are in the range of \$367-\$422 million, which is made up of:

- \$12-16 million for Northland
- \$18-21 million for Waikato-BOP-Coromandel
- \$336-385 million for East Coast, Hawke's Bay, Tararua and the Wairarapa.

B+LNZ has been working closely with the Ministry for Primary Industries, regional and district councils, Regional Action Groups (RAGs), Te Tumu Paeroa and farmers across the North Island, to better understand the damage caused by the cyclones to sheep and beef farms.

This information is being provided to the Government to assist them in determining what further financial and other support is required by farming communities in this critical recovery phase.

As a bedrock for rural communities, a major employer, New Zealand's biggest manufacturing sector and second largest goods exporter, a rapid recovery of these sheep and beef businesses is vital as it impacts all New Zealanders and the economy. Therefore, Government investment in rapid recovery of these businesses should be prioritised.

While farmers and growers appreciate the investment the Government made available in the aftermath of these weather events, it is clear more financial assistance is necessary as most of these costs are uninsurable.

The damage has primarily been to on-farm infrastructure and, unless urgent action is taken to assist farmers to rebuild this infrastructure, the impacts will spread well beyond the farm gate and communities.

This report looks at the immediate impacts. However, further modelling over several years would be useful to understand the potential upstream and downstream impacts, as well as the ongoing impacts for farmers. While there may be some benefits for some businesses (e.g., those that sell materials that will be used in the recovery effort) most impacts will be negative and felt by a wide range of businesses, e.g., contractors, vets, communities, transport companies, processors, and rural suppliers across the affected regions.

The report does not consider infrastructure outside the farm gate. However, this is a critical aspect of recovery. Robust rural roading infrastructure allows farmers to bring in critical supplies for business recovery and exit livestock from their properties. This is part of routine business or necessity brought about by on-farm infrastructural damage and, in some cases, feed supply constraints. Farmers continue to emphasise this is an urgent investment priority for central and regional government.

## 2. Background

There were several 'unprecedented' major weather events in the North Island in the first two months of 2023:

1. Cyclone Hale
2. Auckland Anniversary weekend event
3. Cyclone Gabrielle.

This analysis estimates the cost of the on-farm impacts for the year following these weather events.

The results of these events will have a significant impact on farming businesses and communities for a number of years, but those impacts are unlikely to be easily identified in industry-level statistics.

Revenue estimates are based on B+LNZ's forecasts completed as part of its processes that included the Mid-Season Update report.

B+LNZ focuses on the impacts on commercial sheep and beef farms, defined as those with 750 stock units (SU) or more, for whom farming is their business and provides their family livelihood. Smaller 'lifestyle blocks' are generally supported by sources of income other than their farming activities, e.g., remuneration from wages or salaries.

Based on our review of satellite imagery and work with a range of stakeholders, it is apparent there will be a range of damage effects on farms. We have addressed this by including in our modeling a range of different levels of pasture damage for the calculations themselves and as a proxy for the infrastructure damage incurred.



### 3. Methodology

We used New Zealand's official statistics as the base for the number of commercial sheep and beef farms in the affected areas, and for the number of livestock in the affected areas.

We used B+LNZ's Sheep and Beef Farm Survey and forecasts as the basis for calculating losses of revenue.

We used information from post-cyclone farmer surveys, farmer contacts, satellite imagery, regional councils and territorial authorities (district and city councils) as the basis for estimates of the amount of damage incurred and the costs of reinstating infrastructure, including capital costs.

The pasture damage for farms affected was estimated based on evidence from a range of sources. From those minimally affected (5 percent of grazeable area estimated lost) to substantially affected (35 percent of grazeable area lost) we were able to calculate a range in the total impact. It should be noted that averaging farm damage obscures the fact that a small proportion of farmers may have suffered greater than the average.

Combining the pasture damage estimates with the information about the number of commercial sheep and beef farms and the average area of those farms resulted in an estimate of the grazeable area affected – on average, and in aggregate (by scaling the area affected by the estimated number of farms affected).

Livestock losses were calculated by applying average stocking rates identified from B+LNZ's Sheep and Beef Farm Survey to the grazeable area lost.

The stocking rates were multiplied by B+LNZ's forecasts of Gross Farm Revenue per stock unit for 2022-23 to estimate the loss of Gross Farm Revenue per farm affected and in aggregate (by scaling the per-farm estimate by the estimated number of farms affected).

The vast majority of farm expenditure is incurred at the overall farm level on multi-species farms, not by livestock enterprise, so it was assumed there would be very little reduction in expenditure associated with fewer livestock.

Infrastructure costs were based on the information from the sources, converted to a cost per hectare of grazeable area that was lost (this should not be confused with the total grazeable area of a farm).

### 4. Impact

Estimates of on-farm damage have been made for the East Coast and Hawke's Bay, Northland, the Waikato, Bay of Plenty and Coromandel regions.

#### ***East Coast, Hawke's Bay, Tararua and the Wairarapa***

The East Coast and Hawke's Bay were the areas most affected by the adverse weather, particularly around the Gisborne area.

We estimate that 990 farms on the East Coast, Tararua, Hawke's Bay and the Wairarapa were affected and suffered damage.

The impact on sheep and beef farmers has been multifaceted, ranging from immediate concerns such as livestock welfare and infrastructure damage, to longer-term implications that encompass land management and financial stability.

The infrastructure damage was significant. The main types of damage that farmers suffered were damage to fences, tracks and access across the property, dams, culverts, bridges, water reticulation.

Most of these costs are not insurable.

The table shows an indicative list of items that are the most common items of infrastructural damage for the East Coast. Fencing and track access are by far the two largest costs.

The combined estimated impact on sheep and beef farms across the East Coast and Hawke's Bay is a range of \$336-\$385 million.

Infrastructure	
In-farm access	Water reticulation
Culverts	Pumps/tanks/troughs
Bridges	Plant machinery
Fences	Resowing
Dams	Riparian planting

#### ***Northland***

The majority of the impact in Northland is estimated to be from treefall and slipping. This means investment is ongoing to fencing and clearing of trees, as well as lost pasture.

We estimate that about 115 commercial sheep and beef farms were affected. It was estimated that most of those farms in the region were minimally affected (pasture loss was equivalent on average to 5 percent of the grazeable area) though we are aware of a small number of farms that were more significantly affected.

As a result, the impact is estimated to be around \$12-16 million.

### **Waikato-BOP-Coromandel**

Much of the impact in this area was in the Coromandel and northern Waikato. The damage is largely reported to be from treefall and slipping. This means investment is ongoing to fencing and clearing of trees, as well as lost pasture.

We estimate that about 140 commercial sheep and beef farms in the Waikato BOP-Coromandel region were affected. It was estimated that most of those farms were minimally affected (pasture loss was equivalent to 5 percent on average of the grazeable area).

As a result, the impact is estimated to be \$18-21 million.

### **Infrastructure vs. livestock losses**

Losses of livestock are expected to be low at a region or industry level, but some individual farmers suffered very high levels of livestock losses. In most cases farmers were able to move stock to higher ground to avoid floodwaters.

These estimates lead to the breakdown between infrastructure and livestock losses being heavily weighted towards infrastructure losses. More than 90 percent of the estimated impact was due to infrastructure losses because livestock losses were generally minimal. However, some individual farmers suffered substantial livestock losses.

It should be noted that the impact of lost pasture will inform business decisions around livestock for farmers over the coming years.

### **Māori land**

Māori land has been included in the figures for Northland, Waikato-BOP and East Coast above, but further work is needed to better understand the costs. More than 400 lessees have provided information to Te Tumu Paeroa about the impacts on their whenua.

## **5. Wider business decisions that need to be made over the coming months**

Cyclones Hale, Gabrielle and the Auckland Anniversary weather event will have long lasting impacts on farmers in the regions and will take a number of years to properly rebuild.

In addition to the significant rebuilding plans required on many farms, the business of running the farm continues and decision-making will be more complicated as a result of the storms. Farmer ability to absorb new costs is already very low due to numerous pieces of regulation needing implementation, softening prices and the highest on-farm inflation in 40 years.

Farmers need certainty about what kind of further support they may receive for uninsurable infrastructure damage so they can manage their way through the coming months.

Generally, feed supplies were adequate when the cyclones hit because of high summer and autumn pasture growth and farmers were generally able to manage the significant disruption and delays in getting stock away due to lack of access.

The wet summer and autumn, however, has meant significant disruptions to the sowing of winter feeds and or regrassing. During winter, pasture growth and feed supplies fall, requiring careful matching of feed supply and demand, which will be more challenging due to the impact on winter crops and damaged pastures.

Damage to infrastructure has knock-on effects to on-farm access, livestock control and management (fencing) and on-farm livestock movement and the implications for farm management can be significant. These implications include increased time costs to get usual farm work done and increased productivity risks due to a reduced ability to manage pastoral areas and livestock grazing.

Access is key - both to and within farms. The Government has done a good job in restoring access to farms to facilitate outwards livestock movements and delivery of vitally important materials needed for the recovery.

Nevertheless, access to farms remains below previous levels and will impact on farm business operations and viability. Access tracks on farms that have been developed over many years to facilitate farming have been rendered unusable in many cases. Reinstating them will take years and will depend on availability of time, labour, equipment and consents.

Considering this, we encourage the Government to undertake a comprehensive needs analysis to ensure the issues facing farmers is properly understood and to invest now to ease the fiscal burden of, and speed, the recovery. This will ensure farmers are able to move back to contributing to the economy as swiftly as possible without causing upstream and downstream impacts for the wider community and national economy.