

Beef production is the process of producing the primary products of raw beef and hide which is sold to smaller businesses refine the primary product into a product that can be sold in stores. A Farmers purpose when producing beef is primarily producing as much income as possible through the sales of primary products such as the cows that are sent to slaughterhouses. However, other purposes such as feeding the community with beef produced from the farm are prevalent when producing beef (although profit is the thing most often in mind when selling to people). Farms passed on through families are more likely to carry on farming the land as farmers raised on the farm have the knowledge and skills required to continue beef production causing continued production as the farmer attempts to continue the family business. If suitable land is owned, beef production may be the easiest employment found by the farmer encouraging them to continue farming and producing larger profits as they find purpose in the purchased land.

While beef production may be found throughout New Zealand the largest amount of beef production is farmed and sold in the Waikato region of the north island. The north island contains 71% of beef farms with 34% being spread across Waikato, northland and the bay of plenty. 25% of herds are distributed on the east coast with Canterbury and Westland containing another 18%. The total profit produced by the beef industry sits around 3.7 billion dollars a year. Canterbury holds the largest amount of beef cattle- 542,145 in June of 2023 followed by Manawatu-Whanganui at 517,451 and Waikato in third place with 513,735. Although Waikato may not have the largest number of beef cattle it does have the largest amount of beef producing farms -2,436. In comparison, Canterbury only has 1,458 beef farms despite the larger number of beef cattle.

Physical, climactic and market factors have a large impact on the type of production available in any given region of New Zealand. Physical factors such as topography and soil fertility impact the kind of crop or animal available to farm on the land. For example, dairy production systems prefer flat or rolling land to allow the cattle to gain weight at a profitable rate due to the far more fertile planes and hills. Large rolling hills are not preferred in dairy farming as it uses energy that the cow could have used to create milk, therefore, beef farming is far more profitable on this land as larger hills can be utilized to graze the cattle. Climactic factors such as sunshine hours may change the type of production systems available in the region. High sunshine allows more photosynthesis to occur in the grass and other plants in the pasture ensuring a stable, nutritious food source for the cows. Market factors such as the availability processing plants and distance from major ports or airports may affect where a farm is built due to needs such as slaughterhouses and freezing works that are need after the

stock is taken off the farm.

The purpose and location of beef production is highly depended on the physical and climactic factors of the region as unfavourable topography or low amounts of rain may entirely prevent beef production taking place in the region. The carcass weight and therefore the profitability of stock may entirely depend on the quality of pasture the cattle are grazed on as good grass causes more weight gain. Good soil is especially important in the development of quality pasture in a beef production. Loam is a highly fertile soil known for its excellent pasture quality commonly found in the Waikato plains. If suitable soil is not present on a property, the pasture produced may be poor quality yielding worse results in cattle growth than fertile soils. High rain fall (1200mm-2400mm over the Waikato) is important in beef production as it provides ample drinking water for the stock and steady water for the soil and plants in the pasture providing high growth rate of grass providing feed to fatten up the stock.

While many factors have a large influence on why and where beef is produced in New Zealand, the quality of soil may have the biggest impact of all. The biggest producer of beef, Waikato is a prime example of fertile soil as the loam soils mixed with volcanic ash cause it to be both free draining and easy to cultivate, growing rich and plentiful pasture supporting large herds of beef cattle. Without fertile soil, pasture is slow growing and poor quality leading to slow growth rates and a loss of profit as cattle don't reach their full weight and being sold for less than they would be at a higher weight. Poor soil requires large amounts of fertilizer to ensure pasture growth taking money and time that could be used to better other parts of the production system. Although soil may have a large part in the success of beef production, rainfall may be even more important than the soil. High amounts of rain are beneficial for beef production as cattle require a large amount of drinking water per day to remain healthy as well as high rain for the continued growth of pasture without the need for extra irrigation which costs the farmer time and money that could be otherwise spent on more important tasks. Although both good soil and high rain are required for a beef production to take place in New Zealand, rain would not matter if the soil quality were poor and didn't produce good pasture. Therefore, soil quality has the largest effect on why and where beef is produced in New Zealand.