

# Nufarm

## Introduction:

Nufarm is an agriculture-based company that involves the production of chemicals for various crops. Nufarm is a franchise that is situated through many different countries... Australia, New Zealand, Brazil, Colombia, Egypt, U.S.A, U.K, just to name a few. Nufarm was originally established in Australia in the 1950's it began by selling herbicides for crop applications, and now the company has advanced further and has expanded across all continents. In this essay I will be looking into further depth about the Nufarm company and how future proofing influences affect the viability of the business.

## Environmental:

Protecting the environment has become an extremely important topic around the world. Many environmentalists have been extremely aware of the impacts that factories and other production methods and applications are having on the environment, and the pollution that is building up as a result of that. Nufarm is a chemical producing company so the environment is an important aspect when it comes to future proofing. Based on the sustainability report 2017 for Nufarm we can see that they are aware of the environmental impacts of their industry and have many practices in place to ensuring that they can minimize the impacts on the environment. Nufarm are conscientious of the green house gas emissions and they recognize that they have a role to play in reducing the green house gas emissions, and to ensure that their business is viable for the short term and long term, future proofing is essential for the future generations. Nufarm are targeting... waste and emissions, soil and groundwater protection, and resource use and conservation. Nufarm generate their own steam for the production of heating materials, and they are reusing the steam and ammonium. Nufarm also work with other manufacturing companies to ensure that green house gas emissions are minimized. In 2017 from Nufarm's sustainability report we can see that they have reduced energy consumption, which was mainly due to a change in mix of products. Various accidents that occur in the production side have caused an impact to the environment, such as having a leak of a non-ozone depleting refrigerant from one of their manufacturing facilities. By future proofing their company, Nufarm have to have practices in place to ensure that no leaks from their plants occur. Nufarm have practices in place to ensure that this leak doesn't happen again. At the manufacturing plants the boilers produce NO<sub>x</sub>, SO<sub>x</sub> and CO emissions, these emissions have increased due to the increase in fuel consumption. Nufarm have also had a leak in an underground effluent pipe in Austria, which was estimated to have 3000KL of wastewater leaked into the soil. In order for Nufarm to future proof their business from the environmental aspects, they need to ensure that they use resources as efficiently and safely as possible, and to ensure that they can use environmentally friendly chemicals and compounds that will not have damage to the environment. To future proof their business Nufarm are providing further training for their staff of 1000 hours. This will ensure that staff, are fully educated in the production of their chemicals, which in return will reduce the possibilities of leaks, and other environmental concerns. To further future proof their business Nufarm can develop environmentally friendly chemicals, that won't be as harmful to soils, or leach

into waterways also providing further information to the consumers on the rate of application. Nufarm should also work on ensuring maintenance is done on their production and pipes to ensure there are no leaks, also having regular inspections of the machinery and infrastructure that they use to ensure no harm is done to the environment. In the short term this will reduce the amount of damage to the environment which although will cost more... It'll carry through to the long-term impacts. Where, with further research and development for safer chemicals, and reduces waste emissions, Nufarm can advertise themselves as an eco-friendly business, which in return will give them more business as consumers will be willing to switch products to a more sustainable company. This could also allow Nufarm to have a premium on their products and consumers will be willing to pay due to the reduced impacts on the environment. By future-proofing their business in this way Nufarm will see how their efforts will be beneficial and viable for future generations.

### Economic:

Ensuring that Nufarm achieves their short term and long-term goals to make their business viable for the future, future proofing their business in an economical way is crucial. In a competitive market Nufarm have to have practices and initiatives in place to constantly improve their business and keep attracting consumers to ensure that their business remains viable. Nufarm run 11 global manufacturing plants, however their previously was 13 plants, of which 2 were shut down. This could be for various different reasons such as it wasn't viable and economic to run. The balance between revenue and costs of production is extremely important to seeing that they maintain a profit so that the business remains viable. Many different companies in their industry have combined such as ChemChina, Syngenta, and Adama. Through partnering up these companies can target a wider market and will be able to expand their business, so together they will be able to generate more profit. This can be a major impact on other companies like Nufarm, who aren't in partnership with any other companies. This could possibly put their business under extreme pressure, as those companies could be able to dominate, which in return means that they could adjust the price and Nufarm would have to follow in order to keep business flow. Hypothetically this could create depreciation in their business, which would mean they wouldn't be able to operate. Although this may not be a major concern in the present, if bigger companies continue to expand, this could have negative consequences to Nufarm. To avoid this from happening Nufarm need to future-proof their business for both the long term and the short term. This could mean that possibly going into partnership with other chemical producing companies to ensure that they can remain strong and aren't dominated by competitors. In the short term this would ensure that revenues would increase from the increase in markets and facilities allowing for economic growth. In the long term this can ensure that Nufarm will be able to stay in business, which ensures the viability of their business for the future, they will also be able to increase efficiency, as they can delegate resources. Nufarm can also future proof their business in an economic way by focusing on only a few crops, these crops include, cereals, pasture, vines, corn, trees. By focusing on only a few selective crops allows it allows for Nufarm to research and develop their products for only a selective amount, this means that they can focus more on

increasing the quality of their products rather than the quantity. In the short term this would mean that consumers will be more willing to pay a higher price for the quality of the Nufarm products, which in the long term, can allow for further research and development which could mean that Nufarm will be able to expand their business further or even focus on another aspect in agriculture and horticulture. Nufarm also need to be aware of future impacts that could affect the viability of their business. For example a drought could see sales plummet and revenue decrease, as the consumer demand won't be high. This means that Nufarm would have to have a back up plan, which is where future proofing comes in to ensure that the impacts aren't as consequential. This could mean temporarily shutting down a plant to reduce costs, or temporarily stop producing chemicals that aren't in demand, or find ways to minimize and reduce input costs of production. This will help to ensure that Nufarm's business remain viable.

### Technological/Biological:

By future proofing their business in a technological and biological way Nufarm can obtain the viability of their business. With constant pressure from competitors, consumers, and environmentalists, Nufarm have to constantly be researching and developing their products to ensure that they can meet the viability of the business. Consumers are always looking at ways to increase their revenue, and if Nufarm can produce a chemical to ensure that their customers can help increase the quality of their crop, and then increase their revenue, it'll be a major benefit to their business. By future proofing their business using technological and biological influences then this will further advance their business. For example Nufarm have a chemical that is sprayed onto cherry trees when they are flowering, this chemical helps the flowers to stay open for three days, which in return means that the bees have a longer amount of time to pollinate the trees, which in return will increase the yield. This chemical costs \$1000 per hectare to apply, however it is well worth it because the cherries sold for \$1.36 per cherry to a market in China. If you look at this example you can clearly see how future proofing can have positive impacts on their business. By having a safe biological chemical to apply to allows Nufarm to increase their price, which increases their revenue, and consumers will be willing to pay premium price in order to get the yield quality, this is where the technology helps to improve their business. This in the short term helps to increase sales revenue, which in the long term allows Nufarm to further invest in the technology and biology of their products, which further increases the quality of their products. Another biological part of Nufarm is in their seeds. From their annual report we can see Nufarm's canola omega 3 seeds, and how they have improved the technology for this specific type of seed. Nufarm have developed a new biological seed of canola that has a long chain of omega 3. Omega 3 is essential for human health, which many people are deficient in. This will help meet the global demand, and people will be willing to have to new canola omega 3 seed. In the short term this will see an increase in revenue and people will be willing to try the new approved seed, and in the long term this will see Nufarm as a reliable and sustainable business that people will see as safe, and keep loyalty with. Another way to future proof, their business they can also invest in a new capital resource. This will allow for more efficient use of resources and will be

able to produce more products per unit of time than what a labour resource will be able to do. This also means that they could be able to reduce labour costs, which in return decreases costs of production. So future proofing their business in a technological and biological way will reward their business efforts in the long term, and see that their business is viable for future generations.

### Conclusion:

To conclude future proofing is an essential part of ensuring that Nufarm can be a viable business in both the long term and in the short term. Some factors that are influential in the future proofing of Nufarm are, the environment and how the production of their chemicals and safety of their products in reducing waste emissions and impacts on the environment, will help consumers to keep the loyalty to the business in knowing that they are environmentally conscientious. The economic factors for Nufarm includes looking into future partnership companies to ensure that they aren't dominated buy bigger companies and maintain viability which will be sustainable for the future generations. The final aspects are the technological and biological influences on the business, which includes further research and development into their products to ensure that consumers will be wiling to use their product to benefit their crops. Overall future proofing is vital for Nufarm to ensure that their business is viable and will reach the requirements for the future generations.