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Brazil, sustainable farming

Sustainable Farming in Brazil

Brazil is known for many things; its culture, bright colors, and extravagant environment. Many find Brazil to be a beautiful country, partly thanks to the Amazon rainforest. However, its agriculture is also a shining point for the country. Unfortunately, the growth of demand for beef takes up a lot of land. The rainforest is far too much exploited, stripping it of its natural resources. This causes more problems with climate change. The runoff from the cattle and the constant grazing only further harm the land and its natural systems to keep the planet healthy. However, there are solutions to help better sustainable farming in Brazil. The answer lies in keeping a balance. Rotational grazing and the way cattle receive their water can make a huge difference alone.

Agriculture in Brazil continues to grow yearly. Brazil is the second largest producing country in the world (Yara International). They are the largest producer of soybeans, coffee, sugar, and many more (Yara International). Its climate, weather, and rich soils allow farming of all sorts, ranging from fruits to beans. Brazil has over 5 million large production farms, and 4.1 million small farms (Yara International). In the past 15 years, production rates grew by 156% (Yara International). These farms do not just focus on crops, however. Brazil also is the world's largest retailer of beef products and comes in second for the largest producer ("Beef."). The amount of different cattle herds account for about 218.2 million ("Beef."). Brazil has unkempt its reputation for having a good system, in which it tries to be more sustainable. This includes giving the cattle more space to roam in a natural environment while feasting on the Earth's natural greens, all while doing it at a cheaper cost. The outcome still results in a pleasant product that will do well in the market. In fact, production rates have skyrocketed as of late. In 2023, the production of meat was 8.91 million tons of beef (Menezes, Fabiane Ziiolla). Brazil has shown its ability to put out and produce products successfully while keeping it sustainable.

On the other hand, the Amazon rainforest offers many natural resources itself. One being the most obvious, oxygen. Many people refer to the rainforest as the lungs of the Earth, and it lives up to the name. However, due to overexploitation, it is struggling. The rainforest is one of the resources we use to battle climate change. It is able to take tons of extra carbon out of the atmosphere to prevent build-up (Anderson, Kara). This keeps the temperature more level. The Amazon also plays a huge role in the water rotation. The rainforest can bring 20 billion tons of water back into the atmosphere daily, preventing things like droughts, cleaning the waters, and producing rain clouds (Anderson, Kara). Not only preventing drought in a specific area, but helping worldwide.The Amazon rainforest makes a huge impact on peoples lives, but also other organisms. Many creatures call the rainforest their home. Thousands of unique plants and animals can be found in the forest. These organisms help maintain a healthy balance in the forest itself. Once an animal consumes something, it gives back in some way; often in the form of manure (Anderson, Kara). The manure helps the soil, benefiting the plants and microorganisms (Anderson, Kara). This keeps up the carbon and oxygen system needed to help prevent any further complications in the ecosystem.

However, it is a huge concern we might lose this natural beauty. While sustainable farming looks great on paper, it is far from flawless. Trying to constantly keep up with the supply and demand for beef is wearing on the land of the Amazon rainforest. The farming itself takes up a lot of land, with a singular cattle needing one hectare of land. On top of this, 90% of all cattle in Brazil rely on grass alone ("Beef."). Which is great for price, but hard on the land. When the soil is no longer suitable and grazing land runs thin, they move further into the Amazon for more land. This causes the cows to feed off of the remaining

greens that were left even after taking out the trees, and polluting the spring water around it (DW News). This results in a constant use of taking, and not giving back properly. The constant need for more land will only just keep shrinking the rainforest, and bringing cows to the natural spring water will further pollute it. So not only are we losing a respirator, but also the natural cooling system of the Earth. The runoff from the cattle would prevent the rainforest from being able to produce more clean water and new rain clouds. This would cause droughts throughout the world. As a society, we fail to see the true importance of the rainforest.

Though there are many concerns and problems with sustainable farming, there are ways to better it. One of the solutions is rotational grazing. Rotational grazing holds many benefits, all while still resulting in a good product. Rotational grazing is when cattle are moved from one grazing pasture to the next, giving the other pasture time to heal ("The Benefits of Rotational Grazing"). Not only does it keep the soil plentiful, but it also helps the plants grow stronger routes for their next rotation ("The Benefits of Rotational Grazing"). While the current sustainable farming system saves you money, rotation grazing will still do the same, maybe even better. One of the benefits found in sustainable farming originally is the price, not having to buy extra feed and nutrients for the cattle. The cattle can live off the grass in rotational feeding better. Having healthy cattle in general saves money for profit and breeding. Due to having the constant rotation and time to heal, the soil will stay plentiful. Unlike sticking to a piece of land until it has almost nothing to offer after being fed on for so long. Not only does it keep the soil healthy, but can improve livestock health as well. Due to always having a resourceful paddock to feed in, filled with healthy feed.

The soil itself is not the only benefit of rotational grazing. Not giving the soil enough time to heal can lead to more water usage to keep it alive. Cattle themselves produce 30% of enteric fermentation, a harmful greenhouse gas (Environmental and Energy Study Institute). Grass that is well-kept and full of nutrients can help manage this, due to the fact it is easier to digest for the cow (Environmental and Energy Study Institute). Overall, it would prevent further changes in the environment and help keep the world somewhat cleansed. Keep in mind, it still keeps all the additional benefits of sustainable farming. Being out in an open pasture can benefit the soil regardless if done right. The feces of the cow can give back the nutrients it once sought back into the soil. With the rotation in place, the soil has enough time to decompose the feces to the best of its abilities and use its minerals to produce the same feed for the next rotation. Having the constant rotation is important because if the soil is exposed, it can release carbon into the atmosphere (Environmental and Energy Study Institute). The planet is fragile, and it requires balance. The addition of carbon and greenhouse gasses can disturb the whole ecosystem. Meaning, we have to better take care of it.

A separate way to help Brazil with its natural resources is to limit and control where the cattle choose to feed, making sure their runoff does not go into the clean waters. One of the ways to prevent livestock from polluting the waters is by installing good fences (Environmental and Energy Study Institute). It would have to be more than a simple wooden fence, which yes, would be some expense, but it would be worth it. Having some sort of barrier between the water and potential runoff can prevent problems within the water cycle, therefore further preventing climate change. Controlling where the cattle are can also help (DW News). For instance, instead of finding water for the livestock, water would be brought to them. Not only would it keep the natural spring waters clean, but it would also help the impact of precipitation and the cooling water system.

Overall, keeping Brazil clean should be a main priority. Not just to keep the purity of it, but to help prevent climate change. Just using rotational grazing to help keep the soil plentiful and to keep it from releasing carbon into the air, and being smart about where to put the cattle can make all the difference in the world. Of course, there are multiple other solutions such as cutting back our beef intake, but the more doable in a shorter time can be more than enough. Just by building a fence or a barrier between the

springs, and making sure the Amazon rainforest continues to thrive and produce the oxygen we need, sustainable farming will live up to its name.

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