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Food Waste in Australia: The Growing Problem

Food waste in Australia leaves mountains of spoiled food in landfills, millions being spent just to throw food in the trash, more head of cattle than total population of Australia; all the while resulting in 1 out of every 7 people in Australia unsure of where their next meal will come from. This problem; however, is not just an Australia problem, it is a snapshot of the global crisis that is facing all people in every nation. On average Australia consumes 90 kg, or 198 pounds of meat per person each year. This amount is approximately three times the global average of 30kg. This factored into the population of Australia, roughly 23.5 million people, and the mathematics show that Australia alone consumes 4,653,000,000 pounds of meat annually. This, in global comparison, is more pounds of meat consumed yearly in Australia than the total human population of Asia. While this amount of meat is highly inefficient for mass food production, another kind of food waste also plagues Australia. Australian consumers alone throw out 3.1 billion kg of food each year. This is accompanied by an additional 2.2 billion kg thrown out by the commercial sector. This means that over 450 pounds of food is thrown out yearly per person in Australia. This waste is harmful to the environment but also to the consumer. Food is not free, therefore any waste by the consumer is a waste of money and time as well. This combination of inefficiency and downright waste is not only harmful to the 3.6 million food insecure people in Australia:26 percent of which are children, but also to the over one billion food insecure people in the world today.

Australia, now with a population of approximately 23.5 million people, is a parliamentary democracy like countries in the United Kingdom. This system consists of a prime minister or chancellor who is also the leader of the leading party in parliament. 90 percent of the population is urban, with the largest city being Sydney, with a population of 4.2 million people. The country is predominantly Caucasian and Christian. A typical family would consist of a family of three or four people, living in the city. The children spend the day in school while the mother either works from home or joins the 58 percent of women in the Australian workforce. The father would most likely be the financial support system of the family. This would be considered tradition family and gender roles. Australia is split into just summer and winter and is the world's driest permanently inhabited continent. Known for its diverse animal life and the Great Barrier Reef, Australia is a common tourist attraction. Human development index, a measure of health, income, and education; ranks Australia as the 2nd most developed against other countries. This is great for the welfare of their people, as common leisure includes going to parks for barbecues, fishing, hunting or going on vacation with the 4 weeks of paid vacation that nearly all salaried workers are given. Eating out at restaurants is common practice in Australia. This is presumably because of a relatively higher average income.

The diet of Australians can be compared relatively closely to the diet of the average American. Both countries produce more gross amounts of food than their country eats. Both countries export food just to import it for cheaper costs, and both countries eat high amounts of meat, relative to the global average. While fruits and vegetables are grown year-round, mainstream Australian diet consists of high amounts of protein, typically steak, lamb chops, or sausage. The protein is accompanied by potatoes, put in stir fry, or served with a salad. Following dinner there is desert and coffee. Fast food in Australia is big business also. This big protein trend is even considered, "un-Australian". With a population growth of one percent each year, this lifestyle may eventually be quite difficult to sustain. What makes this system even more confusing and expensive is the fact that Australia exports their beef, just to import beef of a lower cost and quality. One concern of this, however, is that while the visible cost of the imported beef is cheaper,

the environmental cost of overseas transport, constant freezing, and land shipping and transport is a daunting expense.

Many of the problems seen in Australia are closely related to those in the United States. Both are countries that overproduce food yet struggle to feed all the people living in their countries. Both the United States and Australia are some of the most developed countries in terms of education, income, and health. This raises a question as to why Australia's food insecurity mirrors the global average, around 14% of people. The problem is even worse for the US, as 1 in every 6 (16%) of people are food insecure. Seeing such a similarity between the countries could produce a solution to the food waste problem. What works for the US, in theory, could produce similar results for Australia, and vice versa.

One root cause for the food waste in Australia happens before the food ever reaches the grocery stores, mainly the food within the meat industry. Prior research has exposed the great amount of meat within the Australian diet; however, this meat is not even from the cattle raised in Australia. Each year this country exports over 1 billion kg of beef alone. This is followed by an import of cheaper beef from countries with major meat markets, such as the United States and China. The problem in this is not only the dangerous effects the transport has on the environment, but also that scientists estimate that 30 to 50% of total food produced is wasted between the farm and the supermarket. While the majority of this is produce, still an outstanding amount of meat is wasted in the same overseas process.

The food waste challenge in Australia can be seen in multiple ways. The amount of meat eaten on average is too high for any country to sustain; however, there is also a major problem in the amount of overall food waste. As a country they throw out 5.3 billion kg each year, equating to the weight of over 72 Washington monuments. Some food waste is inevitable, but like the United States and the United Kingdom, most of the waste in Australia is traced back to the consumer. A large portion of consumer food waste is from a desire to only eat the freshest produce and spoilage. These problems are prominent exclusively in areas with low amounts of food insecurity, as over time a lack of respect and appreciation for food is developed. This waste is all occurring while there is still an astounding 3.6 million food insecure persons in Australia. A country of about 23 and a half million people waste food at such an incredible rate, all the while having 3.6 million of their citizens, meaning 1 out of every 7 people being food insecure in this country. This is not a problem of cruelty but simply one of negligence. This is not to say that there is no sympathy for those suffering from food insecurity, in fact there is a multitude of organizations and movements that set out to combat this problem, but the problem at its core cannot be fixed with a food bank. It must be combated with education, and social reform.

The other source of food waste in a sense is from a high meat diet in Australia. The average "Aussie" consumes over three times the global average of meat per year. In order to produce 1kg of beef, 20kg of feed is needed. This can be done in a sustainable way, through the use of grass, a food source unavailable to people, to feed the cattle. The problem is that current practices to feed large number of cattle, farmers are using grain. Grain is a food source available to people and using it for livestock feed may be cheap for the farmer, but it is a huge waste of resources. Feed is not the only factor in raising livestock, nor is it even the biggest problem that cattle farmers face. The overall input required to produce a mere 1 kg of beef is 15.455 liters of water, 6.5 kg of crop, 330 square meters of ground, and 16.4 kg of carbon dioxide. A conservative estimate states that a full-grown cow will produce 150 kg of meat. This means that for every cow, the total cost is over 2,300 kg of water and almost 1000 kg of crop, all of this production together equates to nearly 50,000 square meters of land. These statistics would already be worrisome if it were the total cost for Australian beef; however, it is even more expensive when Australia exports 1.2

billion kg of beef each year. This paradigm of food production is not regenerative, it is not sustainable, it is a degenerative and deteriorating model.

Solutions for the food waste problem can be seen in both the commercial and consumer sector. For the individual consumer and their family, potential solutions include composting spoiled food, moving towards a diet with no meat or a, "meat on the side" diet, donating spoiled food to food drives, and most importantly a push in the education systems to teach the upcoming generation on how to responsibly buy food in a sustainable manner. The global education systems should all be increasing focus on the most avoidable crisis currently present, which is food waste. Sustainable shopping includes using senses to tell if the expiration date is the date at which the food can no longer be eaten, eating leftovers from restaurants the next night, or freezing leftovers before they go bad. These practices together could produce great results for Australia. Food drives are excellent as well, and in the United States, the Good Samaritan Law protects those who donate food, therefore if someone were to get sick from eating spoiled, donated food; the person or organization that donated the food is protected from lawsuit.

The main solution to be focused on combines both the commercial sector and the individual consumers. Spoiled produce can still be fed to livestock, rather than left in landfills to decompose and build up. The problem with livestock animals is that when fed with food that is fit for human consumption, there is a large potential for waste. Two thirds of livestock intake are turned into feces and heat, meaning that for every three pounds of feed, a livestock animal on average will return just one pound of meat and dairy products combined. Adult swine eat an average of two kg of food per day. All of this could be made up of spoiled produce rather than feed. This would be an efficient way to feed livestock without making an impact on landfills. This would not only save the farmer money, but restaurants pay more for their trash due to the amount, therefore any way to reduce this amount would be a mutual benefit to both the farmer and restaurant. Due to this mutual benefit, if given the option, many farmers and restaurants would take advantage of it without needing new regulations or laws.

These solutions will do several different positive things for not only Australia but for all people on the Earth. Through these actions Australia alone can decrease the amount of food waste in the household, improve the health and diet of the general population, lower the cost and demand for certain foods in order to make it more affordable to low income populations, decrease the burden on farmers to provide feed for livestock, all the while aiding the commercial sector to pay less for its trash and reduce its waste. Many of these ideas, such as the commercial food industry giving spoiled produce to farms, have already been enacted in the U.K. and have seen astonishing results. Some places have even reduced food waste by the commercial sector by over ten percent only from giving their spoiled produce to restaurants. In Australia that would be reducing commercial food waste by a minimum of 220 million kg of food each year. That would be enough food to feed over 400,000 of the food insecure people in Australia for an entire year. Some of these solutions will take years to carry out, such as the education and lifestyle aspects; however, the simple mutualistic cooperation of restaurant and farm could by itself reduce food insecurity in Australia by over 11 percent. All that is required to enact this system is communication between farmer and restaurant or grocery store. This solution does not require legislation but simply a set example to show its efficiency. Food waste is inevitable but not at the scale at which is seen today. There are ways to help, all that is required is for people to be awakened, informed, and empowered.

In conclusion, there will always be waste in this world. Everyday people throw out tons of edible food while over one billion people are unsure of when they will have their next meal. There is no single country with nonexistent poverty and starvation, and some are far worse than others, but for the highly fortunate of the world, action needs to be taken. Within a decade of increase awareness of fossil fuel overconsumption, science has given the world LED light bulbs and highly efficient modes of

transportation, some that use no gas at all. Within a few years of the increasing thirst in this world, science has given desalinization tools to create drinkable water out of water once thought to be unusable for even crop growth. Saudi Arabia now grows patches of alfalfa in the desert by tapping into underground water sources. The food crisis is growing and, with an estimated 10 billion people near the year 2050, the end is nowhere to be seen. Some scientists even predict that at the current rate of population growth and food production that we will run out of available food in less than a decade. Others predict that we will need to double food production entirely. The problem with some of these models, however, is that they do not always include waste as a variable in required food production. Currently, most food waste is in the fields themselves, as estimates range from 30-50 percent of all food, never even makes it to the supermarkets. This is not a problem for the politicians to fight out, but one for the people themselves. All problems exist in the shadows until people bring it to attention. This waste and hunger cannot go ignored any longer. Change must first start in the home: eat what is edible, not just the freshest ingredients out there, compost what must be wasted to use for home gardens or donation. With time and awareness, this problem can be solved, and soon countries like Australia could be healthier, and have more of their people well fed and happy. The problems addressed by this research are not just Australia problems, United States problems, or even just problems for the most developed countries. Waste at its core is seen in transportation, production, and even in consumption. The waste addressed in Australia is a mere snapshot of the issues currently faced across the globe. When food is wasted, so is all the time, money, and energy that went into producing it. So, by acting at the lowest level, within homes and schools, at restaurants and grocery stores, a change can be made. Food waste in Australia, the growing problem, can be a problem no more.

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