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MALNUTRITION IN ETHIOPIA

"Poverty is an economic condition from which you cannot go anywhere except into debt." – Unknown. This illustrates many places around the world today: Bangladesh, China, Indonesia, etc. But one country in particular comes to mind when faced with the cold hard facts of the quality of life is Ethiopia.

Imagine dry, barren landscapes. Stunted crops struggle to survive under the hot piercing sun. The soil beneath your feet is cracked, dry, and barely able to support the meager harvest that dares to try and grow in such harsh conditions. Only the native vegetation manages to live through this drought. People who visited this country sixty or seventy years ago would not believe the change. It was once a country known for its abundance and good farming. Now it is known for its negative aspects.

Being in the spotlight is not a new experience for Ethiopia. Back in the late nineties, all of America was showered with pictures of stick-thin people, lines that went on for miles at the only source of food, and babies so weak to even brush the flies from their face. A score of benefit concerts and documentaries provided money and food that temporarily improved conditions. What some people fail to see is that Ethiopia is still in a great deal of trouble despite being the largest per capita recipient of humanitarian aide. Forty-nine percent of the population is malnourished even today. Often times when people reach government aide groups for help, they are so crippled by disease there's no point in even eating anymore. Extreme protein deficiencies bring on a disease called kwashiorkor, which leaves the horrible sight of blue dots on the person's face. Many a child is doomed to die a sad blue death. The conditions in Ethiopia are going from bad to worse without anyone really noticing. Food production in Ethiopia is the main cause of the malnutrition of its people. What can we do to solve this? WE need to look at the underlying causes of the low food production and help make Ethiopia a more self-sufficient country. In order to better understand this problem, let's see how it affects families in Ethiopia.

Let me introduce you to the Baramos, a typical Ethiopian family. The father, Alem, works in agriculture. After working in the fields all day, he returns to his wife, Kebedech, and five children aged six, eight, eleven, thirteen, and fifteen. Their oldest child, Brehanu, is thin but muscular from helping his father in the fields. However, the other four children's skinny arms and legs and bloated stomachs show the telltale signs of malnourishment.

Though there are many causes of malnutrition in Ethiopia, the number one cause is food production. Ethiopia has been considered structurally food deficit since at least 1980. In that year, the food gap, which is the gap between what the country has and what the country requires, was .75 million tons. The gap rose to 5 million tons in 1993/94, and fell to the still large number of 2.6 million tons in 1995/96 despite a record harvest. Even in that record year, over 240,000 tons of food aid was delivered. Ethiopia, as of now, just doesn't have the capability to produce the amount of food needed to feed its growing population. As a result of this, only about one point two percent of the population is obese. Let's see how this affects our Ethiopian family.

The Baramos only consume about 2037 Calories a day. The recommended daily intake is 2200 for an average person. While the numbers seem relatively close, it is actually out of proportion. The family spends most of their day doing physical labor. The father, and sons who are strong enough, work in the fields. The women spend the majority of the day scavenging for food and gathering firewood. On the rare day when there isn't work to do, they spend time playing soccer and other sports. Considering all the Calories they burn during the day, the amount of food they take in just isn't enough. In addition, even

if they have a decent amount of food, the food consumed isn't nutritional. The main staples of the Ethiopian diet are barley, tef, and emmer wheat. A combination of these grains make Enjera, a thin sour bread that all classes of Ethiopians eat. While the upper class families usually eat this only as a snack, for most Ethiopians this is a whole meal.

Another effect of the lack of food is the parents have to choose which of the family members are allowed to eat. An old Ethiopian saying goes, "when you eat from a pot, the strongest one eats first." The Baramos, like most Ethiopian families, has a set order. Alem always eats first because he is the father and has to provide for the family. The oldest son, Brehanu, eats second, and the rest of the family gets to eat if anything is left. The problem is, the Baramos don't know how to deal with or recognize the problems that come their way.

For instance, all people know one of the driving forces behind agriculture is rain. Even though Ethiopia has the potential for a lot of rain during the monsoon season, it is still extremely susceptible to droughts. Since 1965, there has been fifteen years of major droughts, including the infamous drought of 1984 that killed an estimated one million people. During an average drought, rainfall decreases by about 30-50%. Considering that even a ten percent decline in rainfall below its average reduces production by 4.4%, a drought is enough to destroy the hopes of families such as the Baramos. This forces them to try and find other sources of food. One of these is the eating of "false bananas." This occurs when the Ethiopians are forced to eat the roots, bark, and leaves of the banana tree before it can bear fruit. In a sense, they are sacrificing tomorrow to survive today. When all else fails, many families look for some outside employment. Unfortunately, there is practically none to be had in Ethiopia. About forty-four percent of Ethiopians report outside income, but it only constitutes about ten percent of their over all income. Almost all outside employment includes working in factories that can easily be labeled as sweatshops. Let's see how our Ethiopian family responds to this.

The Baramo family lives well beneath the poverty line, living on only a dollar a day. When a decrease in rainfall reduces their yields, they have no money with which to buy the food needed to fill their family's food gap. As a result, Alem often has to go look for work outside of his own farm. He will travel as far at two hundred miles searching for some source of income to supplement his family's income and give them the things they need. On a good year he may return with enough money to buy a pair of shoes or some new clothes for his children. Most years, however, he returns home with nothing except a heavy heart and worn shoes. His children won't receive a new outfit or schooling this year.

A large part of the problem, despite the drought itself, is that the Ethiopian people are not equipped to deal with the repercussions of the decreased rainfall. There are almost no irrigation systems set up in Ethiopia. There are several reasons for this. The first and foremost is that there is little opportunity for water at all, let alone wasting it on a futile attempt to try and keep the crops alive. In the places where water is accessible, irrigation canals are just an opening for hippos to come. Another discouragement of the implementation of the canals is the diplomatic force of the surrounding nations. Many nations outside of Ethiopia use the water and are afraid that if the Ethiopians take it, there will be less for them. Considering Ethiopia's history of conflict, the government does not need any reasons for more. The final reason is the enormous amount of money it would take to set up these canals. The Ethiopian people survive on about a dollar a day. These people barely have enough food to keep their family alive. They can't afford to spend it on some adventure that may or may not help them in the long run. As if the weather problems aren't bad enough, Ethiopia has more bad news in the future. Studies show the countries in the Horn of Africa, including Ethiopia, are highly susceptible to climate change. Estimates have the average temperature rising from one to three degrees Celsius. This could drop grain yields up to 30%, although it is impossible to know for sure.

Another reason for low food production is the methods of farming used. First, the average Ethiopian owns only one acre of land to provide for their entire family. There is little to no opportunity to expand on this considering the government owns it all. Farmers are given their plots by the government. Ethiopian soil has always been poor, but it is now getting worse. The seeds used are either the cheapest available or government handouts. The problem with these seeds is that they are bred to produce optimum yield. While on the surface this looks like a good philosophy, it is harming the outcome. These seeds are bred to produce yield, but this kind of seed is highly ineffective. While it will produce optimum yields, it will only do so if the conditions are ideal. In Ethiopia, there are almost no ideal conditions. The seeds can not withstand the harsh conditions that are a constant in Ethiopia.

The Baramos have seen evidence of this firsthand. When Alem received this land, it was relatively fertile and produced a decent crop. Now his crops yields have been lower and lower each year. In addition to the crops decreasing, his funds to buy seed with is also shrinking very rapidly. With his family growing older and larger, this represents a huge problem. He is expected to feed his large family from this one acre plot, and he knows that the land just can't live up to this expectation. Kebedech and the four youngest children will have to survive as best they can on the little they have.

It is clear that the Baramo family has many needs. They have a growing family with a shrinking yield. They are so poor they can't feed their entire family. They have no knowledge of how to improve their status and make things better for themselves. Their children will grow up poor, malnourished, and uneducated with little to no hope of ever changing. However, steps can be taken to help this situation. We can give these people hope in a world that has none. The first step is increasing food production in Ethiopia. If we can teach them to grow enough food to keep their family healthy, things immediately look better. This can lead to a surplus crop and a better income to pay for clothes and schooling. We can't just provide food aide, we need to address the underlying causes of the problem and help to make Ethiopia more self-sufficient.

My first solution is to provide a loan system that people can work with to buy the necessary seeds and other such items for their family. While there are drought resistant seeds on the market, they cost around forty-nine cents a pound. While this may seem like next to nothing to us, to an Ethiopian that is a fortune. The Ethiopian government has a loan system in place now, but it is not structurally sound. It is based on the theory that the more you have, the better off you are. Plus, it is not efficient in working with the people in a way that they can pay it back in the allocated time. A system is needed that will give the people needed time and opportunity to improve their status.

The loan system that I believe would be most effective was set up by Dr. Muhammed Yunus, the 1994 World Food Prize Laureate. This system gives out very small loans, only around one hundred dollars, to the needy. No collateral is needed, only a group of five friends that are willing to be a support group and part of the loan committee. This is very important for the Ethiopian people, because most have no belongings to act as collateral, therefore making them exempt from the governmental loans. This loan is also more effective than governmental loans because ninety-four percent of them go through the women of the families. Giving the loans to women is more effective because they are more family oriented than the men. They would use it to benefit the whole family and not just the ones who are already strong. This is a huge step in helping to solve the malnutrition problems of Ethiopia.

These banks are set up, running, and solving problems in countries such as Bangladesh and Malaysia as well as in the urban settings of Chicago and Alabama. To date, loan recipients have increased their income by fifty percent over a three year period. With this money, Ethiopian farmers can buy better seeds. They may even be able to pay for clothing and schooling for their children while having some cushion to fall back on if hard times come.

My second idea to help increase food production would be utilizing the relatively new practice of agroforestry. The principle behind this is using native plants and trees, specifically leguminous trees, to help increase yields. Farmers would plant these special trees directly in the fields with their crops. Most farmers scoff at this because they believe that they are simply wasting what little field space they have. However, these trees make up for the wasted space.

In Ethiopia, the particular tree that would be of the most help would be *Acacia albida*, a leguminous tree that grows naturally in almost all parts of Ethiopia. Its first special quality is that it makes the soil more fertile. It does this in a number of ways: it brings mineral elements to the surface, increases microbial activity in the neighborhood of the tree, increases fertility through the decomposition of its foliage, and indirectly through the droppings of the animals that sit in its shade.

Its second special quality is its unique habit of showing foliage during the dry season and lying dormant during the rainy season. This is very important for a number of reasons. During the dry season, its pods provide excellent food for livestock and its shade is beneficial to all. This also means that during the rainy season it doesn't compete with the growing crops. Also, considering it is a tree, when it dies or is blown over, the women can gather its branches or cut it down for firewood. It is practically free considering it grows naturally, making it invaluable to impoverished Ethiopians everywhere.

In conclusion, when we look back at Ethiopia seventy years ago, it was a lush, green, fertile place that people flocked to. Now it is impoverished and dry while the Ethiopian people cry out in hunger. These people need to be able to hope again. But it is hard to hope when there is such an enormous food gap. All the Ethiopian people can see is how the land is not fertile, the small land-holdings that are given to them by the government with no way to expand, and how they have absolutely no idea how to deal with the droughts, climate changes, and conflict that continually come their way. They are so desperate for food that they resort to the eating of false bananas to provide some boost to their daily Caloric intake. They think that there is no way out of this hole they live in, and even if there was, nobody out is there is willing to help them. However, there are options.

We can help change this horrible tradition of hunger first by teaching them how to use the land they have more effectively through the utilization of agroforestry using *Acacia albida*. This will increase soil fertility to increase yields and provide invaluable shade and firewood during the dry season. If we are to change things, we must take large steps to prevent and deal with the low food production in Ethiopia. We can't just rely on food aide and money donations to help these people; they must become more self-sufficient. We can help this by providing them with funds through an innovative banking system that loans out small amounts of money with no collateral needed. By using these options, we are giving the Ethiopian people an opportunity to break the cycle of hunger and poverty that has been a constant. No parent should have to experience their children starving to death, and no child should have to see their parents go hungry in order to feed them. Ethiopia is not beyond hope; they are not a "basket case". Steps can be taken to help families like the Baramos. It is up to us if the situation is to improve. Addressing world hunger should begin with Ethiopia.

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