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Kenya, Factor 11: Malnutrition

Kenya: How Education and Sustainable Agriculture will Decrease Malnutrition Rates

Kenya is a developing country that has had its share of efforts transcending human efforts to rebuild and modernize its current state. The nation is located in Sub-Saharan Africa on the East Coast, sharing borders with Somalia, Ethiopia, South Sudan, Uganda, and Tanzania, all developing countries (“Africa.”). The economy in Kenya is mainly market based, and they maintain a liberalized external trade system, allowing them to easily export their major agricultural products. The country can be broken down into urban and rural areas, and then from there into three main linguistic groups, over forty tribes, seventy ethnic groups, and religions and languages that change dependent on the group. This is the cause of many cultural barriers, along with a lack of unity within the people. Urban areas have allowed these people to be brought together in recent years, as the country is becoming more urbanized. Kenya’s capital and largest city, Nairobi, has a growing population of over 3.5 million. Sixty percent of Nairobi’s population are represented by citizens living in slums, while occupying a mere six percent of the capital’s area (“The World Factbook...”). Kibera houses many of these people, and is the largest slum in Africa, proving the extent and significance of poverty in Kenya.

The family dynamic in Kenya plays an important role in the impoverished lifestyle common to Kenyans. In past years, it was not uncommon for men to have five or six wives in Kenya. When the parents pass away, the inheritance will almost inevitably go to the eldest son due to legal barriers to women inheriting money or land (“Kenya - The Concept...”). Family is incredibly important to the people of Kenya, their traditions passed down through the generations, especially through the tribes the people belong to. Particularly in rural areas, women typically don’t carry out jobs, instead cooking and caring for the family. They help with work in their fields, as well as taking goods to sell at markets. The level of poverty for women in Kenya is exacerbated by gender-based violence, including sexual and physical violence. Women’s empowerment is hindered by polygamy, early marriage, and harmful cultural and traditional practices (“Where We Are...”).

This lopsided arrangement of power not only affects the women involved, but also hinders the development of Kenya by cutting off a vital resource: their women. Women are expected to be obedient to men, tending to the home and children. Many women are uneducated and unable to receive healthcare. Due to these issues, the duty to simply raise a healthy family is increasingly more difficult, as according to recent surveys, over 40,000 pregnant and nursing women in Kenya are severely malnourished, up over twenty percent from 2016. This heightens mortality risks, premature births, and low-weight births, all of which lead toward malnourishment for the children of these women (Sohngen). As difficult as life already is for many women in Kenya, the educational system is unreliable and insufficient, discouraging new and future generations from solving the problems that make Kenya a developing country. In the last couple of years, people have worked to confront some of the restraints that kept girls away from school. Since Kenya’s government introduced free primary school in 2003, enrollment rates have increased by 84

percent. However, in some regions, where poverty levels and gender inequality are high, only 19 percent of girls are enrolled in school (“Confronting Barriers...”).

In Kenya, 48.1 percent of land is solely used for agricultural purposes. In total, a growing 10.2 percent of the country is considered arable land, a small amount for the 61.1 percent of their labor force that relies on agriculture for their income (“The World Factbook...”). In comparison, the United States has 16.8 percent arable land and a mere 2 percent of its labor force works in farming related practices. This demonstrates the difference in ratios of farmers to cropland between a well developed and undeveloped country. The climate in Kenya varies from tropical along the coast to an arid interior (Butterfield). This provides an extensive variety of conditions for Kenyans to live and work in. The terrain consists of low plains that rise to central highlands, which are bisected by the Great Rift Valley and fertile plateau in west. Pressure on the environment via the rapid growth of population is one of the main inducements of malnutrition, as it goes up staggering amounts yearly (Aboge). The urban population is growing by 4.15 percent annually, dropping the rural population and bringing down the labor force necessary to grow and provide food for its people (“The World Factbook...”). Not only does more food need to be grown to provide for Kenyans, but the land and soil degradation has lessened the amount of healthy crops. Over 12 million Kenyans reside in areas with severely degraded land, one of the reasons crop productivity growth has failed to exceed population growth (Mulinge).

The typical diet of rural populace consists of the staple dish, ugali (a type of cornmeal), served with meat (when can be afforded), and vegetable stew. Corn, wheat, beans, and spinach are some of the most commonly grown crops sold in Kenyan markets and consumed by Kenyans. Daily, less than one US dollar per person is used for living expenses (“Food & Daily Life.”). Currently, the prevalence of malnutrition is growing, and not only due to the lack of sufficiently produced crops, but also due to the lack of money to pay for food for families. The current fertility rate is 4.3 births per female, far too high of a number considering the lack of ability to feed the families.

Clearly, the challenges faced by the people of Kenya are all connected. Without enhancing education to improve agriculture practices, malnutrition will retain its harmful position to Kenyans. The resolution to any quandary such as this must focus on young generations, and on educating them to a level where they can become self-sufficient in determining solutions to their problems. The solution must begin with education. In Kenya, where primary education is free, families often must pay for textbooks, uniforms, and teachers’ salaries. Additionally, when children attend school, they are not contributing to the family’s income by holding a job, regardless of how little the pay is (Girls’ Education:...). These costs and perceived losses make it difficult for families to justify sending a child to school. Particularly in certain communities, girls are expected to marry early and join their husband’s family, leading parents not to readily see how education benefits their daughters or the family (“Confronting Barriers...”). This issue will be the first to be handled, as the education of all people is necessary to work against malnutrition.

The framework of Kenya’s National Goals of Education currently focuses firstly on fostering nationalism and patriotism and secondly on promoting the social, economic, technological and industrial needs for national development. Then in order as following: self-fulfillment, religious values, responsibility, cultural ideas, international attitudes, health, and environment (“Kenya’s Basic Education...”). Just one look at the overall curriculum shows the focus on ideas and values throughout primary schooling, rather

than the necessary courses to prepare students for jobs, particularly in agriculture. The curriculum taught must be adjusted to fit this. Textbooks in Kenya, once the curriculum has been changed, should be recycled annually, rather than individually purchased by each student. According to one of the most common websites for purchasing textbooks following the primary school education requirements, the cost of textbooks currently ranges between 300 Kenyan shillings and 600 Kenyan shillings per book (“Primary School | Books...”). The average amount of textbooks purchased per student each year of primary school is three textbooks. There are over 10 million children in Kenya that should be in primary school (“Population of the World.”). If this amount were saved annually per student for just two textbooks each, approximately between 6 and 12 billion Kenyan shillings would be saved. Furthermore, school uniforms need not to be required to prevent unnecessary waste of money. Over just three years, the money that is currently wasted on new books and uniforms would add up to between 18 and 36 billion Kenyan shillings. This would be enough to repay the costs of rewriting and printing new textbooks that could prepare students for the labor force.

Implementing this solution would be simple with the help of the government, as it has control over primary schooling (“Kenya.”). Instead of purchasing new textbooks each year, recycle the old ones for a couple years while rewriting, printing, and distributing the curriculum. Primary school enrollment will be adjusted to cost the amount saved in books as opposed to the previously “free” enrollment, that didn’t include textbooks and uniforms. 1,000 Kenyan shillings per student would be ideal as an enrollment fee, as it is less than one tenth of a percent of the average salary in Kenya (“Kenya | Average), and would amount within the previously calculated number. The new curriculum would greatly impact the future of Kenya’s people, particularly its youth, as they would be taught necessary skills to be successful in the workforce. Once taught these skills, providing for themselves and their families will be more manageable, giving them a chance against the misery of malnutrition.

Once education is improved to prepare Kenyans for the workforce, the focus can be shifted to agriculture. Soybean is a very important crop in the world. Its economic, nutritional and functional importance warrants due attention in Kenya where over 30 percent of children are malnourished, unemployment rate is over 40 percent, and fertilizer use is low. Soybean is a legume crop with the ability to fix nitrogen. Having a high protein content of up to 40 percent and oil content of 20 percent that have essential amino acids and unsaturated oils respectively, soybean has been recommended by nutrition experts to deal with increasing lifestyle diseases and already high levels of undernourishment in the country (Jackson). The crop is versatile, in terms of its both utilization and agronomical attributes. It is a crop that can grow in varied agronomical areas, convertible to many products e.g. tofu, soymilk, soy beverages, soy seasonings and soy meal and be an ingredient in many products such as bread, cakes and breakfast cereals. In its complete value chain, soybean can form a huge industrial base for a developing country, especially such as Kenya.

However, soybean production in the country has remained low and has never picked up since the British colonialists introduced it in 1909. Unlike countries in the Northern hemisphere and the Americas who have embraced the crop and enjoyed its benefits, adoption of the crop has remained low (Diaby). Soybean development policy need to be established and the crop considered for the important crop it is by all stakeholders. The government may be able to play an important role in introducing large scale soybean production to Kenya. Soybean use for human consumption in Kenya remains astonishingly low in comparison to alternative protein sources. Limited awareness for health benefits, nutritional value and

consumers' misperceptions about taste and usefulness have contributed to the low consumption. In contrast, Kenya's industrial demand for soybean products is growing (Diaby).

Just under 20 percent of Kenya's land is suitable for growing crops, 8 percent of which is medium potential land and 12 percent being high potential with adequate rainfall for good production results. Yet less than 8 percent of the land is actually used for crop and feed production, and only 1.87 percent used for permanent crops ("Kenya - Agriculture"). This lack of efficient land use only proves how much education and increased production would benefit Kenya and strengthen its people. Over 11 million Kenyans are farmers, making up the majority of the labor force at 61.1 percent. The agriculture sector is the backbone of Kenya's economy, thus making it an effective means to target in order to solve malnutrition.

Kenya's annual demand for soybean is higher than in any other African country. Currently soybean is being grown in two regions: the western region and the central highlands. Annually, Kenya imports over 100,000 metric tons of soybean meal and about 150 metric tons of soy protein concentrates, and textured soy protein from China, while Kenya produces a mere 5,000 metric tons of soybean. There is need for the national and county governments to allocate more funds for promotion of the crop as a nutritional savior to the current malnutrition levels in Kenya as well as an avenue for encouraging soybean industry. There is need to increase seed multiplication and involve companies like the Kenya Seed company for seed multiplication and distribution like has been previously done with maize (Diaby).

Finally, immediate relief of the hungry and malnourished population can be achieved via feeding programs targeted to mothers and children. As urgent it is for the Kenyan government to implement a viable long-term solution, it is equally necessary to nourish famished Kenyans and save them from chronic malnutrition. Soybeans are an excellent source of protein and contain nine essential amino acids as well as healthy omega-3 oils and fiber. Soybeans have a high concentration of calcium that promote bone health; they are also known to contain isoflavone, a substance similar to estrogen, which can help ease symptoms of menopause and minimize the risk of osteoporosis (Sohnngen). Therefore, it will largely benefit the young mothers and starving children.

The benefits to be gained from reformed education along with implementing programs focusing on the growth of the soybeans would largely decrease the amount of children and women in Kenya suffering from malnutrition. Nearly 73,000 children in Kenya are currently suffering from severe malnutrition, not only stunting their growth, but making children more susceptible to diseases and lowering their ability to combat illnesses (Sohnngen). The most crucial factor to consider when helping to eradicate malnutrition in any developing country is whether the project eventually is self-sustainable or not. Although foreign aid and the efforts of organizations across the world contribute to feeding the malnourished population, it is not a permanent solution ("Where We Are..."). By educating these children and preparing them for the workforce, they will one day be able to sufficiently feed themselves and their families. The efforts to increase soybean production would be a short term solution without the correct processes of soybean growth being taught to future generations. With the education and soybean projects, less and less Kenyans will be hungry and undernourished, eventually breaking out of the cycle of poverty. This is a nationwide crisis that requires a nationwide effort to resolve.

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