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Overcoming Food Insecurity in Swaziland

The statistics surrounding the global issue of food security are astounding. Around one billion people in the world are unable to obtain food on their own, while Americans dispose of fourteen percent of the food they purchase. Fifty million of those who are hungry are children. The average American uses four hundred to six hundred liters of water a day, while one billion people in the world do not have access to clean water. These numbers show the large gap that exists between America and those countries that are suffering around the world. However, these numbers are simply numbers, and certainly are not a substitute for the stories of each person suffering from lack of food. But for now, they demonstrate the overwhelming need for something to be done to solve food insecurity around the world.

The prices of food around the world have risen at an alarming rate in the past two years and consequently have posed a threat to the health of millions of the poorest people around the globe. Developing, low income countries were the hardest hit, as they had the least amount of resources to obtain food. The major causes of the rising global food prices have been the lack of investment in agriculture and the greater demand for food due to the expanding world population. Although food insecurity seems to have reached its peak in 2008, it remains a concern that needs to be resolved. More than one billion people, including three-fourths of the world's poorest people, depend on agriculture to survive. Improving agriculture production and distribution would cause the reduction of the cost of food, resulting in a triumph in the areas of world poverty and hunger.

One country that is in dire need of improvement in agriculture productivity is Swaziland. Swaziland is a landlocked country in Southern Africa. It is about the size of New Jersey and has a population of just over one point two million. The standard of living for Swazi citizens has made a steep decline in the past decade. The life expectancy at birth is just thirty-two years of age, which is the lowest in the world. It is forecasted that by 2010, this number will drop even lower to twenty-seven years of age. These low numbers are mostly due to the fact that thirty-nine percent of Swaziland's population is estimated to be HIV positive, which is the highest infection rate in the world, which of course threatens the future of the country.

While it may initially seem that food security is an entirely separate issue, in reality it is not. After looking under the surface of the problem it is clear that food or lack thereof is at the heart of the AIDS problem. Organizations such as the United Nations must realize that solving the HIV/AIDS pandemic and combating food shortages must be a joint effort.

Due to the lacking food supply, people in Swaziland are willing to do just about anything to obtain food for survival. It is fairly common to see a teenage girl caring for her siblings after her parents have died from AIDS. In her search to provide food for her family, she might turn to prostitution. Oftentimes women will have sex with men in exchange for just a loaf of bread or eggs. Not only does that not solve her problem, it increases her chances of becoming infected with HIV. The food shortage cycle continues if one member of the household has AIDS. According to a study done by Gona Rural in 2005, households with one AIDS victim produce fifty percent fewer crops than healthy households.

Agriculture is an important aspect of Swaziland, both economically and socially. About one third of Swaziland's population is engaged in some aspect of agriculture. Swazi farms are much different than ones that are found in the United States. Most farming households own a small plot of land that was given to them by a traditional chief. Much of this land is owned by the aristocracy and government, who own

over sixty percent of all Swaziland territory. Their restrictions further limit the production of crops. The most common crops grown by individual families are maize and vegetables. Smallholders make up about seventy percent of Swaziland's population, but only provide eleven percent of the country's total agricultural output. The low productivity can be attributed to poor irrigation, a problem that is exacerbated by drought.

A typical rural Swazi family has eight members. Due to the AIDS pandemic, many households are left in the hands of the elderly or children who are not able to cultivate the land. In recent years, the number of households headed by women has risen to about thirty percent. Due to the AIDS crisis, there are over eighty thousand orphans in Swaziland. That number is expected to grow to over one hundred and twenty thousand in 2010. Considering the population of Swaziland is just over one million, these statistics are especially inconceivable. If this problem persists, these children will likely bear the burdens of poverty, illiteracy, and malnutrition.

Women especially are at a disadvantage in Swaziland. According to national law, women can possess land and manage their household finances. However, the traditional social systems of the country discourage and prevent women from controlling land. Women also have less access to education in rural areas. It is estimated that over seventy percent of women in rural Swaziland are illiterate, compared to the national average of twenty-one percent.

The major factor in increasing agriculture productivity and improved food security in Swaziland is adapting farming to water scarcity and climate change. In addition, a focus needs to be put on reversing natural resource degradation. Changes in climate have caused the once self-sufficient country of Swaziland to experience severe food shortages in recent years. The rain patterns have changed considerably in the past ten years. In the past rain would come in August and September, but now the rain does not come until October or November. In January, just as the crops are reaching maturity, there are dry spells. Lands that were once productive are becoming marginalized. Poor rural families do not have the knowledge or resources needed to combat the conditions, and experience low harvests as a result.

The degradation of natural resources is also a major problem in Swaziland. Many maize farmers practice mono-cropping, which is when the same crop is grown year after year in the same location. This practice takes the nutrients out of the soil, which makes the soil dry and eroded. Infertile soil makes it even harder to obtain successful yields of crops. The uprooting of trees for firewood is also affecting the quality of natural resources because it leads to severe soil erosion. A traditional Swazi belief is that cattle represent wealth. Smallholders grasp tightly to this belief, and are often unwilling to sell their livestock. This leads to overgrazing and land degradation, which further hinders the success of small farms.

The problem of natural resource degradation is present throughout Africa, and steps taken to reverse it will require the whole continent to change its habits. An agricultural revolution is needed; one that will increase production while minimizing damage to the environment. Organic farming, an alternative to using chemical fertilizers and pesticides, is a solution that will create the best outcomes for Swaziland in the future. Forcing African subsistence farmers to rely on synthetic fertilizer is unreasonable. Most households do not have the finances needed to purchase these resources regularly and need an agricultural method that will persevere in the toughest of times.

Organic farming employs the use of crop rotation, compost manure, and mulching. Its benefits are plentiful. By denying the use of inorganic fertilizers, less greenhouse gasses that contribute to climate change are produced. Organic farming reconverts crop residue into compost instead of burning it, preserving soil fertility. Employing these agricultural practices in Swaziland would help replenish the soil with micronutrients, which have been depleted by mono-cropping.

The effects of climate change are only expected to deteriorate in the upcoming century. To create a long lasting solution to food insecurity, an emphasis needs to be placed on irrigation. It has been proven time and time again that it is the key to improving agriculture production. According to the FAO, irrigation increases production of most crops by one hundred to four hundred percent. Currently, sub-Saharan Africa uses less than five percent of available water. Irrigation also allows farmers to diversify their crop production. Diversification in agriculture would lead to a decrease in the degradation of natural resources, leading to a more stable and efficient atmosphere for farmers.

To find a permanent solution to food insecurity in Swaziland, similar successful projects must be examined. From these developments, organizations can learn what plan of action has the most potential to thrive in Swaziland. For example, Malawi, another small country in Southern Africa, is a living example of the benefits of an improved irrigation system. Malawi has experienced droughts and floods comparable to Swaziland and similarly relies on maize as a staple crop.

To fight the unpredictable precipitation patterns in Malawi, the United Nation's Food and Agriculture Organization (FAO) has developed a new water resource program. This initiative supports close to thirty thousand farmers by creating small-scale irrigation systems and water harvesting programs in Northern Malawi. Since its launch in January of 2008, agriculture in Malawi has improved significantly. Before the program's installation, small subsistence farmers typically produced maize once a year practicing rain-fed agriculture. Now many families are able to have two yields each year using small-scale irrigation systems, even during dry seasons. The success of irrigation systems in Malawi reflect the potential that Swaziland contains. The two countries are strikingly similar in agricultural conditions, so it is natural to assume that similar results would occur in Swaziland.

For Swaziland, adapting farming techniques to the erratic rain patterns caused by climate change will require new methods of water delivery. As seen in Malawi, irrigation and water harvesting can make all the difference in agricultural productivity. The lasting benefits of irrigation can already be seen at work in Swaziland. Irrigation that has been implemented in the sugar cane, citrus, and cotton industries has been highly successful. For now, irrigation has been contained in the sector of business farming because the financial return is extremely high. There are more incentives for investment in business farming than subsistence farming. The government and organizations like FAO must be the first ones to implement irrigation systems for smallholders.

In order to be most effective in combating food shortages in Swaziland, a coalition of the local government and leading global organizations must be formed. The key groups that should be involved are the FAO, SWADE, and the Swazi government. It is essential that the Swazi government support each project for it to be effective.

The International Fund for Agricultural Development (IFAD) is another program that should receive additional support from the Swazi government. The agency, which focuses on agriculture development and poverty eradication, stems from the United Nations and works closely with the World Food Programme. Its goals seem to be most accurate in addressing all of the issues of Swaziland. They target the most vulnerable social groups in the country like single mothers, orphans, and households affected by HIV/AIDS. IFAD arrived in the country in 1985, and has since spent the equivalent of about one hundred and forty million dollars to improve food security and reduce poverty. The organization recognizes that the allocation of water is an important factor in increasing agricultural productivity, and has established the Lower Usuthu Smallholder Irrigation Project as a result. This project, establishing irrigation systems in the poorest area of the country, is an impressive and successful model which can be utilized for future projects.

There are existing irrigation programs in the country, but funding is lacking. The government-controlled Swaziland Water and Agricultural Development Enterprise (SWADE) insists that there is plenty of water in the country but the lack of water delivery poses the greatest obstacle to resolving hunger issues. SWADE should combine their financial resources with IFAD to make water delivery a priority in the poorest areas of Swaziland. Efficiently creating a network of canals and dams to meet the farmers' needs will be the first step toward achieving irrigation goals.

In its quest to obtain food security, Swaziland faces natural resource degradation and water scarcity caused by climate change. In recent years, it has become apparent that rain-fed agriculture does not work with the current uncontrollable environmental conditions. Smallholders are constrained by their limited access to irrigation water, thus farming must be adapted so that it is not dependent upon rainfall patterns. Providing farmers with proper water resources would help reduce the immediate effect of droughts. Irrigation systems, like the ones already developed in Malawi and the Lower Usuthu area, are an effective method of sustainable agriculture that have proven to increase the agricultural productivity of rural farmers. Irrigation systems must extend beyond the hands of industrial farming and into the reach of smallholder farms.

In addition, education should be implemented to prevent further damage to the environment. International organizations like the Food and Agriculture Organization should promote organic farming among rural farmers. Techniques like crop rotation and organic fertilization would help to reverse the damage done by overgrazing, mono-cropping, and deforestation by reintroducing nutrients into the soil. These efforts, combined with small scale irrigation systems would vastly improve food production in rural areas of Swaziland. It is imperative for these programs to target the poorest areas of the country, which are most vulnerable to food insecurity.

Although building new systems will require large investments from several international groups, the end result will be a positive one. If farmers reach the point where they are self-sufficient, organizations such as the World Food Programme will be able to reduce their costly hunger relief efforts. In order to create a lasting solution, the problem must be fixed at its roots rather than just supplying aid to temporarily satisfy the country's need for food.

In order for any of these programs to be successful will no doubt require the cooperation of international organizations and the Swazi government. With such a high prevalence of poverty, disease, and hunger, the country of Swaziland is clearly in desperate need of change. Addressing food insecurity will prevent the cycle of HIV/AIDS from carrying on at its current rate. If living conditions do not improve, the already grim statistics will continue to worsen. Because food security is a global issue, it will require the effort and support of multiple countries in order for the current situation to be improved. It is the responsibility of those countries with abundant resources to address and fill the needs of the world around them.

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