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Malawi: The Role of Developmental Education on Improving Food Security

When it comes to countries that rely heavily on agriculture, few compare to Malawi. “The Warm Heart of Africa’s” economy and culture are built upon the agricultural sector, and the country depends on successful crop yields for increasing growth, development, and overall progress. Agriculture accounts for one-third of the entire nation’s GDP, and ninety percent of export revenues come from its products. Apart from being essential to the national economy, agriculture also has an immeasurable effect on the nation’s micro economies and the livelihoods of its people. Malawi’s population exceeds sixteen million, and eighty percent of the people live in rural areas and villages (“World Factbook”). Consequently, agriculture is the primary employment of more than eighty percent of the work force, with ninety percent of rural households cultivating smallholder farms (IFAD). All of this is true in a country that is roughly the size of Pennsylvania, and has only 20.68 percent arable land (“World Factbook”). This disproportion poses several significant challenges for the nation and its people. In a country centered on agriculture, undernourishment is one of the most prevalent issues. A nation that focuses on growing food struggles to sustain its own population, and is currently too underprepared and under-resourced to consider the populations of the future. Because of this, a new approach to addressing the root of food security problems must be adopted. By focusing on developing the education system in Malawi to spread the knowledge of more efficient and productive agricultural practices, the country has the potential to end its cycle of food insecurity and enter an age of sustainability.

To better understand the impact new developments towards food security would have, it is important to recognize the composition of an average subsistence farm family in Malawi. Malawian families typically have six or more members (IFAD). In general, extended families live together in compounds of huts made of mud-bricks with thatched or tin roofs. The men are typically farmers, but may work another job depending on their level of education. The women raise the children, cook the meals, and farm, often taking on more roles than the men. The staple food of the Malawian diet is *nsima*, a thick porridge made of corn flour and water. It is eaten every day, and often dipped in *ndiwo*, a broad term for “condiment” that includes meat, fish, vegetables, or whatever is available. Most eat a small amount of *nsima* or bread in the morning and save the main meal for the evening—lunch is only guaranteed after a good harvest. Although *nsima* and *ndiwo* are conventionally viewed as enough to suspend hunger, many Malawians “do not consume enough calories to meet basic nutritional needs.” Locally grown fruits and vegetables, meat, and other foods are sold at markets, but are often expensive (“Culture Gram”). In general, the average Malawian villager has a large, community-focused family and a nutritionally-deficient diet.

The education available to the average subsistence farmer in Malawi is sub-par at best. The current system is known as 8-4-4: eight years of primary school, four years of secondary school, and four years of university or technical education. Ironically, none of these numbers are accurate: most children attend primary school for longer than eight years if they do not drop out, a small minority continue on to secondary school because of restricting fees, and even fewer finish secondary school because of the difficulty and emphasis placed on the exams at the end of the second and fourth years (“Education in Malawi”). Malawi is in a similarly dismal state when it comes to healthcare. A 2008 survey found that only .019 physicians and 1.1 hospital beds were available for every one thousand people (“World Factbook”). Medical knowledge and disease prevention tactics remain limited in most areas, despite recent government efforts at implementing health centers and fee-based mission hospitals (“Healthcare in Malawi”). Overall, education and health systems in Malawi lack resources and do not produce desired results because of isolation, insufficient numbers of professionals, and ineffective management.

Although some agriculture practices vary by region in Malawi, definite commonalities span the country. Nationally, the average farm size is about 0.8 hectares, which is down from 1.5 hectares in 1968. Causes of this drop include a growing population and a stagnate availability of new agricultural land. On average, farmers cultivate small and fragmented landholdings, often in areas where soil quality no longer produces high crop yields. Eighty percent of all the agricultural land is used to grow maize, which in turn feeds families directly and is sold to local markets. The major export revenues come from the growth of tobacco, tea, sugar, and coffee, on estate land “under freehold or leasehold tenure” (IFAD). Over fifty percent of Malawi’s export earnings come from tobacco, although most *mlimi*, or smallholder farmers, focus almost exclusively on the growth of corn (FAO ix). In smallholder farm production, “farm mechanization is virtually nonexistent and all farm work is done manually” so availability of labor is incredibly important (Takane 183). Subsistence farmers often cultivate and fertilize their land by hand, transport their corn products to a maize mill for grinding and winnowing into flour, and then use the flour to make *nsima* for their families (“Our Africa”). Other major agricultural practices include long-term seasonal off-farm growing contracts, and more common short-term casual labor contracts known as *ganyu* (Takane 184). In general, the average rural Malawian family focuses on growing enough maize to support itself while the growth of cash crops is typically reserved for larger estate lands.

Currently, several barriers exist to improving agricultural productivity in Malawi. Seasonal constraints affect the performance of the rural economy and the population’s livelihood, and food secure families often struggle during the lean season (Dorward iii). The current labor contract system causes a high risk of production and likelihood of food shortages (Takane 197). Soil depletion, limited resources, and an overall lack of diversity in new technologies for crop planting techniques have also caused recent setbacks, especially after natural shocks (Dorward & Kydd 345). Barriers to employment and earning a living wage include a “lack of diversification and poor communication in thin markets,” leading to a small amount of trade and increased risks of failure (347). Because of the lack of success of the education system, the majority of Malawians will never move past self-employment or short-term contracts as subsistence farmers. The wages of the typical farmer in Malawi are not enough to sustain a successful living; more than half of Malawians live under the poverty line (IFAD). Poor infrastructure, transportation, communications, and services lead to high expenses in transporting rural goods and “high costs for communication about market opportunities and prices” (346). Because many Malawians obtain variety in their diets strictly from food markets, the current state of low wages and high prices results in many people not receiving adequate nutrition from the crops they grow to support themselves.

Despite recent advancements including the establishment of multi-party democracy and universal primary education, Malawi is still a struggling nation. However, many governmental, international, and local efforts have produced encouraging results that suggest the discussed barriers can be overcome. One of the most influential causes of food insecurity in Malawi is insufficient investment in agricultural education. The current education system does not empower future leaders of agriculture; it focuses on basic skills largely disregarded when many students drop out and return to their farms. The second part of this paper addresses the current state of education in Malawi, ways it can be improved to increase food security and relevance to the Malawian economy, and suggestions for implementing these practices.

Malawi’s education system causes several direct effects that limit the average family’s ability to produce enough food. A lack of formal instruction on modern agricultural innovations—including crop rotation and diversification, improvement of soil quality, and ability to withstand shocks—has limited the amount and variety of food that families produce. Unaware of existing techniques for improvement and lacking the resources to implement them, families often end up at the mercy of the weather, poor soil, and unfavorable labor contracts (Takane 197). They fall into a repeating system that traps and prevents them from earning sufficient income, because short-term labor contracts cripple their ability to develop sustainable agriculture on their own farms (Whiteside 9). Improved agricultural education has the potential to reverse this trend by endowing average *mlimi* with the knowledge of how to improve

production and nutrition, and therefore income. Because the only jobs that guarantee sufficient income to purchase food in Malawi require completion of secondary education, and the majority of people do not even finish primary school, their incomes remain relatively unstable (Chimombo 22).

Free public education was not adopted in Malawi until 1994. Although this was a huge step forward, its poorly planned nature ultimately led to failure. A million new students joined the system in its first year, and monumental increases in attendance continued for the next three years. The result: “Overcrowding increased, the few resources in schools were inadequate for the increased numbers, and the recruitment of temporary teachers made the teaching and learning process fall short of what was expected” (“Malawi: Education”). Education has improved since then, but issues including unbalanced student-to-teacher ratios (80:1), inadequate resources and facilities, and very poor attendance and passing rates—only thirty-five percent finish the recommended amount of schooling—still plague the system (Castel et al. 4). In its current state, education in Malawi forces parents to choose whether or not to pay secondary school fees. Because many do not see the need for education on subjects such as mathematics in an agricultural society, they choose to withhold that money (“Education in Malawi”). The situation is severe: as few as ten percent of males between the ages of 28 and 42 have completed secondary education, and women of the same age have completion rates of around three percent (Castel et al. 1). Girls are at a significant disadvantage as well; they are often discouraged by their families to stay in primary school because of its impact on their household and field responsibilities, and may drop out at young ages to marry (Williams). The current state of education also directly impacts the environment, because for every Malawian not educated on new agricultural practices, there is a proportional decrease in viability of arable land as soil conditions are continuously depleted through current farming practices (Bohne 17).

When considering other challenges that will affect the well-being of Malawian communities in the years to come, it becomes apparent that the best way to combat these issues is through an improved education system. Recently, climate change has caused unpredictable rainfall and droughts, resulting in crop failures and even the displacement of some people (“Malawi Drafting”). This has devastated rural livelihoods, because families lack the knowledge and skills needed to predict and avoid these disasters by diversifying crops and developing crop resilience methods. Population growth is also an issue in Malawi: the land is already stretched thin, and with the current annual growth rate of 2.76%—the eighteenth fastest in the world—new methods of efficiency must be adopted (“World Factbook”). Currently, the large population of children at primary school age greatly outnumbers the available teachers, so the issue of overpopulation creates a need to hire and train more instructors. Water scarcity does not affect Malawi as much as other sub-Saharan African countries—ninety-five percent of urban people and eighty percent of rural people have access to improved drinking water (“Malawi”). Urbanization and energy demand are not currently major problems facing Malawi either; a majority of the population and schools do not have electricity, and the rural population thrives despite rapid urbanization. Environmental issues mainly include deforestation, land degradation, and water pollution from agricultural runoff (“Geography: Malawi”). Perhaps the biggest challenge presently affecting the wellbeing of rural families in Malawi, however, is disease. At least eleven percent of the population is HIV positive, and malaria is also endemic throughout the country (“World Factbook”). Disease leaves thousands of Malawian children orphaned each year, so there is a responsibility to prepare them to thrive on their own. Overall, most of the major issues facing Malawi are directly related to the agricultural sector. If the people are properly educated on the impending need to address these concerns, new agricultural practices and regulations will be instated to help reduce them.

Despite today’s need for vast advancement, the trends for education have been gradually improving over the past few decades. The main trend that measures educational quality is a nation’s literacy rate, currently 81.1% for men and 68.5% for women (“World Factbook”). Even though this is relatively low, it shows a marked increase from before universal primary education was adopted. Improving trends concerning the number of schools with libraries and book corners were also observed in the early 2000s

(Chimombo 12). Recently, the government increased spending on education by twelve percent in the 2009-2010 year, causing it to reach five percent of the GDP (Castel et al. 3). These measurements indicate that the situation is changing, to the benefit of rural farm families everywhere. However, the biggest issue that still remains is convincing rural parents to send their children to school. Improvements made to the education system mean nothing if they do not reach the population in a relevant way.

According to the Food and Agriculture Organization, “youths of today are the leaders and farmers of tomorrow,” so a lack of change in agricultural policy among young people perpetuates the cycle of food insecurity (Acker & Gasperini xviii). Specifically, reformed education has the potential to sustainably preserve the environment by introducing new growing methods for new crops—for example aquaculture and crop rotation, with diversified crops like ground nuts and legumes—and therefore reduce soil depletion (60). It would lead to economic development and poverty reduction by teaching *mlimi* to respond to “changes in technology, natural resource challenges, opportunities for on-farm and off-farm employment, the need to adapt to climate change, and opportunities in entrepreneurship and small enterprise development” (68). As the rural sector develops because of education, the gap between the urban and rural areas will be reduced, and “the non-farm sector will build on the gains made by smallholder agriculture and increasingly influence real wages and food security,” thereby benefitting both smallholder farmers and urban dwellers (Dorward et al.).

A focus on improving education holistically by including agricultural instruction at all levels would radically increase food production for farm families in Malawi. It is essential to recognize that the current disconnect between the education system and its relevance to the Malawian economy can be eliminated, but members of all ages and classes must work together to achieve this. Providing vocational and technical training programs for youth in conjunction with community leaders to increase agricultural development across all sectors is the best way to achieve food security (Acker & Gasperini 78). By involving the whole community in the education process, there is less resistance to change from those not directly involved, and a greater potential for a sustainable future. This can be done in several ways. A positive approach to implementing agriculture studies in primary education is “integrating it with science and business curricula,” so students learn improved methods of farming along with entrepreneurship strategies, and are not pre-determined to be subsistence farmers for the rest of their lives (69). This method of incorporating classes on agriculture would satisfy Malawian adults and professionals, because it leaves opportunities open while cultivating necessary agricultural knowledge in *mlimi* students. Parents would no longer be reluctant to send their children to school, because they would directly observe the relevant knowledge their children were being equipped with as they brought it home and applied it to their farms. Along with agricultural studies, incorporating health into the primary and secondary curriculums would help students appreciate the systemic relationship between food, nutrition, and agriculture, as well as lower the risks posed by diseases (69). Making these simple changes to early curriculum in Malawi would have profound effects on reducing hunger, especially because a 2007 study found that “primary education is a crucial element to reduce food insecurity in rural areas, even when compared to other factors such as access to water, health and sanitation” (89).

Youth education by itself, even with the support of the community’s adults, is not enough however. Community and adult education are also necessary. A method similar to Iowa State University’s partnership with a Ugandan NGO called Volunteer Efforts for Development Concerns (VEDCO) could be successful in achieving community education in Malawi. The program used a “blend of science-based and indigenous knowledge to promote capacity development” and provided training, materials, and follow-up support to community volunteers who assisted in delivering adult education. These VEDCO-trained volunteers would host regular meetings to demonstrate improved health practices and crop management techniques with new, disease-free crop varieties. The results were better than expected: “by mid-2007, 77 percent of the 800 households working with the programme reported they had achieved food security, compared to 9 percent in early 2005” (60-61). These impressive statistics reflect a growing

trend in pro-poor education: informal skills training for adults on how to find “balance among life skills, food production skills, and self-employment skills” leads to greater diversification and resilience in future crops planted by those educated in this manner (77). If the Malawian government were to work together with NGOs to develop a needs-based approach for applying community education to rural villages and universal increased agricultural education in primary and secondary schools, then achieving all eight Millennium Development Goals would become a reasonable possibility.

An example of successful cooperation among different organizations in Malawi is the Likuni Hospital Project. The FAO, Christian Health Organization of Malawi, and Dan Church Aid all partnered to create a program that develops a sustainable model for relevant adult agricultural education. When parents bring children to Likuni because of malnourishment, they wait in the hospital’s garden and receive free training on better horticulture practices and ways to improve nutrition. Lessons include methods for “producing composite manure to maintain soil fertility” and cooking demonstrations for unfamiliar foods. Parents, like Eliza Positani, then leave with vegetable seeds, a hoe, a watering can, and new knowledge on diversified crops. Eliza started two flourishing gardens with her seeds: one for her family, and one for her community. Now she has access to cabbage, tomatoes, okra, and a variety of other vegetables; she used to grow corn exclusively and could only afford to purchase vegetables once a week. “The Likuni Hospital...project serves 96 villages spread over an area of 250 square kilometers [and] reaches more than 16,800 households.” Since the project’s beginning, readmission rates at the hospital have dropped from thirty-four to six percent (Langdon-Morris). This project’s success in increasing food security through agricultural education can be attributed directly to its focus on self-sustainability, as well as the partnership between the national and international organizations and the villages in which they serve. It is this cooperation that facilitates lasting improvement.

Communities, the national government, corporations, international organizations, and rural and urban families all play important roles in implementing the aforementioned recommendations for improving Malawi’s agricultural education and reducing food insecurity. Leaders in rural communities need to maintain educational facilities, strive towards becoming self-sufficient without organizational aid, establish gender-sensitive learning environments, and work directly with the national government to expand rural education in the poorest areas. The national government needs to provide sufficient funding for universal educational development; this includes the building of schools, removal of fees for uniforms and secondary school classes, and financial encouragement for more teachers to come to rural areas (Acker & Gasperini 83). Corporations and organizations need to use their broad oversight to provide necessary resources, training, and follow-up support for areas that cannot be significantly impacted with only state-provided monetary aid. They must do this only to an extent that establishes basics, facilitates progress, and empowers communities to develop on their own when they withdraw. Rural and urban parents must encourage children to attend school, and model this themselves by attending community and adult education sessions. The rural and urban sectors must also recognize that they are both “critical for poverty reduction, with different but complementary contributions to pro-poor growth” (Dorward et al.). Recognizing that everyone has an important role and establishing partnerships based on this knowledge leads to true progress in the fight against hunger and poverty.

In conclusion, Malawi is a land full of potential. Despite the current state of food insecurity, with the proper implementation of education, widespread food security can become a reality. If efforts at community agricultural advancement are scaled up alongside the development of standardized agricultural education in primary and secondary schools, then the MDGs truly can be achieved. Education promotes political stability, individual liberties, the creation of new jobs, and new innovations in current jobs to ensure increased success for future generations. A universal Malawian education system with the suggested cooperation and modeled after the given examples would have the capacity to end poverty and hunger, promote gender equality, increase the health of people of all ages, combat disease, and create global partnerships in a sustainable environment.

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