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East Africa: Burundi, Factor 6: Sustainable Agriculture

Burundi: Advancing an Agriculture Approach

We have a problem; every night nearly one billion people go to bed hungry. That is reason enough to start solving world hunger. The Republic of Burundi is one of the world's poorest nations. Burundi is a small, densely populated, developing country located in East Africa. Burundi land mass is approximately 27,816 square kilometers (Burundi Country Profile n.pag), and consists of hills and mountains. The average population density is two hundred fifty-seven people per square kilometer (New Agriculturist n.pag), and half the population lives below the poverty line (Burundi Country Profile n.pag).

Burundi is struggling to emerge from a twelve-year, ethnic-based civil war (Burundi Country Profile n.pag). The war emerged due to conflict between two distinct ethnic groups, the Hutu and the Tutsi (Countries and their Countries n.pag). The Tutsi's, currently make up fifteen percent of the population, hold power and still control the military forces. The Hutu's, also known as the Forces for National Liberation, constitute an estimated eighty-five percent of the population, affect every aspect of society, especially the government. Stability and peace appeared to be within reach after years of bloody conflict, although this was achieved through a peace agreement it was short lived. The government and the remaining Hutu Rebels agreement fell apart after the government rejected rebel demands for power sharing. Power sharing is a policy between political parties or within a coalition to share responsibility for decision making and political action (Burundi Country Profile n.pag).

As hundreds of thousands of Burundians return to their homeland from refugee camps abroad that they fled to during the conflict, they are now facing a new crisis; a chronic shortage of arable land (Wasting Away in Burundi n.pag). Although Burundi has been slowly rebuilding itself over the past decade, poverty and hunger remain deep, with around sixty-two percent of the population undernourished (Improving African Agriculture n.pag). Through educating the citizen's of Burundi, on sustainable agricultural practices their land can become fertile and productive once again to feed their struggling families.

Ninety percent of the population lives on less than two U.S. dollars a day. In fact, ninety percent of the population is small subsistence farmers (New Agriculturist n.pag), and only ten percent of Burundians live in urban areas. Half of all urban residents live in the largest city, Bujumbura (Republic of Burundi n.pag).

Burundi has a patriarchal family structure. The father is considered the head of the family and traditionally makes all family decisions. A son, that the father chooses, regardless of birth order, is in charge of the other sons and the family properties (Republic of Burundi n.pag). Families are expected to care for parents in old age. Older children are often given responsibility for younger siblings when parents are away or busy (Republic of Burundi n.pag).

Due to the spread of AIDS, Burundi has many single-parent and child-headed households. Traditionally only male children can inherit land. If an adult woman has never been married, she is given a small plot for cultivation until she gets married or dies. If a woman has a male child out of wedlock, the child has no land to inherit unless he is formally recognized by the father (Republic of Burundi n.pag). Under customary law, women have few rights, and they are unable to own land or livestock (Improving African Agriculture n.pag). In a country heavily reliant on subsistence farming, a child without the right to land

faces an uncertain future and would likely to be forced to find a low wage job in an urban area, leaving behind what they have always known in their rural upbringing (Republic of Burundi n.pag).

A traditional rural dwelling is called an urugo. It is often a collection of two or three small thatch-roofed huts in which a nuclear family resides. In the rest of the country, families often live in houses built with mud walls and floors. Roofs are made of corrugated metal or clay tiles. Bathing is done in a nearby river or by using a damp cloth on the face, hands, and feet (Republic of Burundi n. pag). Due to all of the work on their land and houses, very little time is left for education.

Recently, the government pledged free public primary education for all children and abolished school fees. This resulted in an overwhelming influx of students, compounding shortages of teachers and classroom space (Republic of Burundi n.pag). Even though families are not required to pay school fees, they must still pay for books and uniforms. Due to costs, families often prefer to send only their boys to school, keeping their daughters at home to watch younger siblings and take care of other household chores farming and preparing meals (Republic of Burundi n.pag).

The average family plot is .8 hectares, or two acres (Encyclopedia of the Nations n.pag). Within the .8 hectares, just half is cultivated for food. This is well below what is needed to guarantee good nutrition (Improving African Agriculture n.pag). Land use included 35.57 percent arable land, 13.12 percent permanent crops, and 51.31 miscellaneous uses (New Agriculturist n.pag).

Principle crops for local consumption are manioc, beans, bananas, sweet potatoes, corn, and sorghum (Encyclopedia of Nations n.pag). Bananas alone make up almost thirty percent of the total cultivated area. Coffee is the main export, accounting for more than sixty percent of export revenue, but national production is declining. Cash crops include cotton, sugar, and tea (New Agriculturist n.pag). Cultivated land is 33.06 percent (Burundi n.pag). Natural resources include arable land, nickel, copper, platinum, vanadium, niobium, tantalum, gold, tin, tungsten, kaolin, hydropower, and limestone (New Agriculturist n.pag).

The main staples of the Burundian diet are beans and root crops such as sweet potatoes and cassava. Ugali, a stiff dough made from cassava or other crops, is eaten with a sauce and vegetables. White rice is popular in urban areas. Bananas, maize, and peanuts are also a significant part of the typical diet (Republic of Burundi n.pag). Most Burundian families consider meat a luxury reserved for special occasions. In the countryside, people usually skip breakfast, eating just two meals a day. Some urban families may eat breakfast, but it is a small meal. Mealtimes are not set and food is generally eaten for sustenance and not pleasure (Republic of Burundi n.pag). With limited amount of food produced by the family, there is very little that can be sold for income to be used on other life needs.

Many people are unable to afford health care, as a small fee is required and patients must pay for any medicine they need. The government also began to provide free health care for children under age five (Republic of Burundi n.pag). Although there are many struggles educationally, agriculturally, and health wise, the biggest concern that contributes to all factors is the struggle with agricultural barriers.

Major agriculture barriers include: diminishing soil fertility, land fragmentation, stagnant or declining yields, falling soil fertility, and the absence of fertilizer inputs. Diminishing soil fertility is compounded by shrinking farm sizes which is forcing people to clear forest and drain wetlands. Furthermore, options for breeds of livestock and low levels of technical knowledge have prevented farmers from boosting production and increasing their outcomes (New Agriculturist n.pag). Burundi's smallholder farmers face a myriad of constraints to increasing their farm productions. Other major constraints to smallholder farm production include inadequate extension and research services, poor access to credit, weak producer associations, as well as variable water supply and localized droughts, resulting in climate change (Improving African Agriculture n.pag).

Subsistence farming continues, despite the increasingly difficult circumstances, mainly because the rural population has few other options. There is little off-farm employment and few adequate markets in which to sell produce. Land scarcity and uncertain land tenure arrangements are major barriers to agriculture growth and can be a source of conflict (Improving African Agriculture n.pag). Forty-three percent of the land area is arable or under permanent crops. About 74,000 hectares or 182,800 acres are irrigated (Encyclopedia of Nations n.pag). Soil fertility is steadily declining because land is over used and farmers no longer leave fields fallow. Forest resources are also under pressure because wood provides ninety percent of energy needs. Forest cover is on the decline (New Agriculturist n.pag). These practices are accelerating soil erosion on steep slopes, flooding in lowlands, depletion of water sources, sedimentation of lakes, drying of wetlands, and biodiversity loss. Climate change is expected to exacerbate agriculture constraints including access to water and crops, diseases, water pollution, and soil erosion and to impact food production (New Agriculturist n.pag).

The supply of dairy products is far below what is required to meet the growing demand. If nothing is done to increase livestock production the country could be facing annual deficits of eighty six million tons of meat, thirty nine million liters of milk, and eighteen million eggs by 2020 (New Agriculturist n.pag). Burundi has few agriculture storage facilities or processing plants resulting in significant losses particularly for perishable products and transport and marketing infrastructure is inadequate, roads are in poor condition and links to neighboring countries and international markets are inadequate (New Agriculturist n.pag).

These concerning factors above, along with Burundi family household inability to produce enough food, earn sufficient income, or have access to adequate nutrition has lead to the following issues; widespread poverty, climactic disasters, overpopulation and a lack of materials to make it productive, and a means that a staggering one in ten people suffer from severe acute malnutrition causes a concern to improve education and agricultural practices (Wasting Away in Burundi n.pag). If not caught early enough, the effects of hunger can destroy a child's life, as they typically drop out of school, earn and produce less, breed more poverty and pass down hunger to the next generation (Wasting Away in Burundi n.pag).

Predicted temperature increase of over one degree Celsius could reduce maize yields by five to twenty-five percent if technological improvements are not adopted, and this would significantly compromise food security (New Agriculturist n.pag). More than ninety percent of the population lives in one and a half million smallholder farming households which produce ninety-five percent of the country's food (Improving African Agriculture n.pag). After years of conflict, a large number of men were killed, as well as a rapid spread of AIDS has lead to poor and fragile female-headed households (New Agriculturist n.pag). The most important factors are women who account for fifty-five percent of the workforce and do seventy percent of the farm work, even though they have very little rights or access to land (Improving African Agriculture n.pag).

The present status of this factor is severe. The environment is being degraded due to the lack of education of simple sustainable agricultural practices that are being utilized to improve productivity. Women are at a disadvantage with laws restricting them from owning and inheriting land so the nations should consider women's rights as well as improving the educational opportunities for females. The factors discussed above are measured by the amount of arable land, the population growth, and the increase of those who go hungry. If the individuals that own land were educated on various factors including production methods such as rotational grazing, crop rotation, insect management, and erosion reduction, capability to marketing products, and land management to increase yields.

The United States supports the role of law and opposes the attempt to seize power unlawfully. The United States also supports the mediation efforts of the United Nations. The people are doing what they can with the little they have. Unsustainable methods of farming have been passed down through generations and it

is time they are educated on the proper methods so their land is arable in the future. The individuals in Burundi, at this point, are open to options. Educating the citizens about various aspects of growing crops and teaching them basic sustainable agriculture practices are key in helping them develop a more sustainable way of life. Those who live with hunger each and every day are the most valuable resource we have in understanding and working to solve world hunger. Burundi's population is young and rapidly growing. Nearly seven out of ten people are under the age of fifteen (New Agriculturist n.pag). If the individuals in Burundi were educated on the importance of crop rotation, cover crop, soil enrichment, natural pest predators, biosensitive pest management they could significantly increase the yields and dependability of the basic food crops. The education will provide the Burundi people with knowledge. Knowledge will transfer from innovative farmers through generations and make Burundi a more sustainable place to live.

Educating individuals whether female or male, can only be done when the citizens and governments work cooperatively with both the private and government assistance they are receiving. Private sectors could assist in providing additional funding for families by showing them how to produce and market their own products whether those products are homemade jewelry or extra produce. Government should be more concern with educating them all on the production of food. This can be done by sending extension or other similar entities to show options of implementing the above suggestion. This should be done through test plots to show examples to them. With the lack of technology methods typically used in United States with have to be modified to fit their financial standings as well as resources available. There are many examples out there that could be followed including works that Norman Borlaug or Warren Buffett. The work they did is still influencing and changing the world for the better.

In conclusion, The Republic of Burundi is significantly affected by hunger. With nearly one billion people going to bed hungry each night we cannot afford to continue to ignore the growing numbers of individuals affected not only in Burundi, but around the world. Spreading our vast knowledge to developing counties is a simple solution with a significant outcome. The resources in Burundi are minimal, but the people of Burundi are our greatest resource. Thus, an increase in education availability to everyone and increase awareness and use of sustainable agriculture practices is a must.

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