

Emma White
Webster City High School
Webster City, IA
Rwanda, Factor 6

Rwanda: Developing and implementing sustainable agricultural practices

Rwanda is known as the “land of a thousand hills.” Rwanda is a mountainous country located on the far western edge of the Rift Valley, bordering on Burundi, the Democratic Republic of Congo, Uganda and Tanzania. Rwanda has a population of 11.4 million (U.S. Census Bureau, 2011) in an area the size of Maryland. Half of the population is under the age of 20 years old (National Institute of Statistics of Rwanda, 2009). Chronic malnutrition affects 44% of children under five (DHS, 2010). Fifty seven percent of Rwandans live below the poverty line, thirty seven percent live in extreme poverty living on less than \$0.90 a day (Feed the Future, 2012). Beginning in the 1970’s, Rwanda began to receive substantial bilateral and multilateral development assistance. Since the 1994 war, hundreds of international nongovernmental organizations have also become involved in relief and development efforts. Despite these programs, Rwanda remains among the ten poorest countries in the world.

War and political turmoil have led to radical population shifts in Rwanda in the past decade. Rwanda is the most densely populated country in Africa. Before the 1994 war Rwanda was among the most rural countries in the world, but the war caused rapid urbanization. Millions of people were uprooted from their homes, hundreds of thousands killed, and hundreds of thousands more returned from long exile after the war. Three-hundred thousand widows and orphans survived the genocide with HIV/AIDS from mass rape (Global Giving, 2012). When the war ended Rwandan society underwent rapid social change. Meanwhile, the government instituted a program of villagization in the countryside, forcing peasant farmers to leave their isolated homesteads to live together in small overcrowded villages. While the government claimed that these villages were intended to facilitate the administration of social services, many people believed it was designed to facilitate social control.

Developing and implementing sustainable agricultural practices to combat erosion would help the agricultural industry of Rwanda. The mountainous topography historically encourages largely self-sufficient local communities. Rwandan farmers are dependent on two cropping seasons with little artificial irrigation. Farmers are highly vulnerable to the variable climate, drought is a regular hazard. The main cause of the food insecurity is the tiny average size of farming plots. The government estimates that 60% of the population is dependent on farms less than 0.7 hectares (OneWorld Guides, 2012). More pressure on farm sizes is exerted by a high population growth rate. Plus, Rwanda’s natural topography is one of the structural weaknesses. Eighty percent of arable land lies on slopes, causing soil erosion. Poor farmers lack resources or access to credit necessary to improve their land. At least 80% of the population is dependent on agriculture for their livelihoods (OneWorld Guides). The most serious risk of hunger is found in farms which fail to diversify from the staple crops of kidney beans and sweet potatoes. Many farms are unable to find supplementary income sources to compensate for shortcomings in subsistence.

With almost no natural resources other than land, no access to the ocean, and an extremely dense population, Rwanda’s economic possibilities are extremely limited. Approximately 40-50% of agricultural land is moderately or severely degraded from erosion and continuous use. (World Bank, 2007) Coffee has been the most important export, followed by other agricultural products such as tea and pyrethrum. Since the 1970’s, Rwanda’s economy has been heavily dependent on foreign economic assistance. Foreign aid had financed the construction of roads, water and electrical systems, and the development of new economic ventures, most recently flowers for export. These ventures have generally benefitted only a limited elite associated with the government, while doing little to address the growing poverty of the masses.

With such an overwhelming dependence on farming, the Rwandan government recognizes that investment in agriculture is the most cost effective path of poverty reduction. Solutions for food insecurity problems are needed in Rwanda. Some projects have helped solve Rwanda's issues. For example, the Crop Intensification Project supports a modern intensive model of farming with high technology seeds, fertilizer, irrigation, storage and processing. The goal is to reduce dependence on farm livelihoods to 50% of the population by 2020. Starting in 2009, a five year program is under way for the National Land Center to register 8 million land plots, many of them small fragments divided between family members. Women are now entitled to equal rights of ownership. In return, households will come under pressure to cooperate with proposals to consolidate land use. These will include mergers of small plots into more viable units, establishing cooperatives, and moving into new village settlements which are more efficient to support than scattered homes. The government's Strategic Plan for Environment and Natural Resources Sector (2009-2013) involves a determined effort to integrate environmental sustainability into all economic development plans. Rehabilitation of soil and water quality is most visible in programs to terrace the steeper farm slopes so that planting can be extended. The target is to protect 80% of the areas vulnerable to soil erosion by 2020 (OneWorld Guides, 2012).

Some benefits of registering land would be that the amount of food produced in an area would increase. Another positive benefit could be being able to consolidate two different farmers' ideas or skills. For example if one farmer owned a cow that produced manure and another farmer was taught about drought resistant crops, bringing the two positive skills or objects together could benefit the crop yield. A drawback of consolidating land could be that a farmer that lives off of his field might have to combine land with another farmer. This could lead to some disagreements regarding how the products should be split between the two. If farmers could work together I think that consolidating land could be a good thing. To build a self-sustaining populace Rwanda must allow rural farmers to take their business into their own hands. By getting together with neighbors and other farmers they could save their families from poverty.

Rwandan food is very simple. The most common foods are beans, bananas, sweet potatoes, potatoes, and sorghum. Dairy products are also widely consumed. Those who can afford to do so also eat meat, primarily beef, goat, and chicken. Most Rwandans own the land they work. Traditionally, Rwandans control their own land and pass it down as inheritance to their male children. Overpopulation and related poverty have led to land accumulation by a limited elite and the emergence of a class of landless poor, but even the very poor own at least some of the fields they work. If the poorest of the farmers received money or loans to start up their family farm, they could support their family.

Agriculture work is divided between women and men. Men clear the land and assist women in breaking the soil, while women engage in most of the day-to-day farming activities such as planting, weeding, and harvesting. Men bear the primary responsibility for overseeing livestock. Men also do heavy jobs around the house such as construction, while women are responsible for maintaining the household, raising children, and preparing food. Formal nonfarm employment is dominated by men, while women often participated in informal economic activities such as market trading.

Women in contemporary Rwanda hold few political positions and have limited economic power. When the father passes away, inheritance is split up between sons, so women rarely inherit land and property. Rwandans consider children a sign of wealth, and bearing children is an important social duty. As a result, Rwanda has the highest rate of fecundity, or ability to reproduce, in the world, and Rwandan families are quite large. Rwandans practice both Western and indigenous forms of health care. Christian churches have built numerous hospitals and health centers, but many Rwandans continue to visit indigenous healers who combine herbal medicines with spiritual cures.

A Rwandan woman has an average of six babies in her life and if current trends persist, Rwanda's population will double by 2034. Rwanda currently has a population of over nine million and is one of the most densely populated countries in Sub-Saharan Africa. Rwanda's high fertility rate and population density contribute to conflict over land. Although the majority of women do not use either a modern or a traditional contraceptive method, the number of women that use contraception is growing. According to the Interim Demographic and Health Survey for 2007-2008, the proportion of reproductive aged women (ages 15-49) women currently using either a modern or a traditional contraceptive method has grown from 10 percent in 2005 to 27 percent in 2007. The total fertility rate dropped from 6.1 to 5.5 in the same period. Forty nine percent of surveyed women have expressed a desire to limit births; they do not want to have any more children. This represents an increase of 16 percent since 2000 (USAID, 2012). If the U.S. helped to donate contraceptive methods such as birth control or condoms to families that can't afford it, we could help keep some families from extreme poverty levels.

Until 1994, educational opportunities for Rwandans were extremely limited. After the genocide, most primary schools and more than half of prewar secondary schools reopened, though no more than 5% of the adult population received secondary education through 1996. Although educational quality remains an issue, access to education expanded dramatically in recent years and the Government of Rwanda's Nine-Year Basic Education policy, implemented in 2010, contributed to an increase of the primary school completion rate from 52.4% in 2008 to 79% in 2011. Free basic education will be extended from 9 years to 12 years in 2012.

The National University (NUR) in Huye (formerly Butare), Rwanda's sole university prior to 1994, reopened in April 1995; enrollment is over 7,000 students. Today, there are 29 institutions of higher learning in Rwanda. Between 1963 and 1993, Rwandan university graduates numbered roughly 1,900; today, Rwandan university enrollment exceeds 60,000. Sixty-three percent of the adult population is literate (2009). Building the educational system continues to be a high priority of the Rwandan Government. Rwanda has three official languages--Kinyarwanda, French, and English. The recent transition to English as the language of instruction in schools presents pedagogical challenges even as it offers prospects for increased opportunity within the East African Community and internationally.

In Rwanda, cows are not just animals but a household industry providing milk for children's nutrition, family income, fertilizers for high crop production and emotional healing for lonely genocide survivors. The traditional cow breed in Rwanda is the Ankole. These cows are very hardy animals and can live in very poor conditions with little water and poor grazing. Ankole cattle have extremely long horns that grow outward on either side of the head. They also have fairly large ears through which they lose heat. In Rwanda these animals are highly prized as status symbols, the more cows you have the more wealthy you are. When the genocide broke out cattle were also slaughtered indiscriminately. Although some cattle survived, many of the hundreds of thousands of widows were left without their precious cattle. Many Rwandan farmers lose cows to disease because they lack access to quality veterinary services. By keeping these cows healthy and productive it means improving the livelihoods of men, women and children. Cattle provide an important source of nutrition through milk and produce enough to sell, allowing families to pay for daily needs such as education, clothes and health care. Cows also produce manure which can significantly improve crop yields from the exhausted soil. The calves can also be donated to widows struggling to keep their families alive. If we could establish healthy productive herds and distribute them to different families we could help a family be able to support themselves. Cattle specialists and veterinarians could teach the Rwandan people about animal husbandry and help them build sheds for the animals. Vets could discuss feed, water, housing, parasite control, breeding and artificial insemination to improve herd sizes.

In Rwanda a couple organizations such as Comfort Rwanda and Global Giving have started systems to distribute cows to poverty stricken families. Comfort Rwanda is an organization that produces a nucleus breeding herd of Friesian cattle. Friesian cows produce 17L of milk each day, ten times more than most traditional cattle in Rwanda. Comfort Rwanda was established in Scotland in 1999 and partnered with another organization called Solace. Solace is an indigenous Rwandan charity that brings aid to widows and orphans following the genocide of 1994. This partnership has established two herds in Nyanza and one in Kabuga. New projects are planned to start in Muyira and Bisesero.

To receive a cow Rwandan people must have a suitable field to rear the animal. Comfort Rwanda and Global Giving both rely on donations to fund the projects. Each cow costs the organizations 850 euros or about \$1,044.90 U.S. dollars. After purchasing the cattle the organization gives away the cows to families in need. A huge struggle for both charities is coming up with enough money to support their projects. For example, Global Giving had the goal to raise \$10,000 to start up the project. After getting donations they only ended up getting \$2,000. This was enough to start up the project, but the money will eventually run out. If both charities advertised or spoke to individuals more about how their money would help a family in need, the organizations could be a lot more successful. Global Giving and Comfort Rwanda are also generating jobs in Rwanda. Global Giving predicts that over 600 jobs could be created, ranging from veterinarians to farm hands.

In Rwanda there are already organizations trying to combat poverty. The government of Rwanda has made agricultural and rural development a national priority. Initiatives are supported by the U.S. Government through Feed the Future, the GAFSP (Global Agriculture and Food Security Program) multi-donor trust fund, and ActionAid, a leading development nonprofit organization. Each initiative is notable for its emphasis on sustainability and the empowerment of rural, small-holder, and especially women, producers.

Feed the Future represents a \$3.5 billion pledge to tackle global food insecurity. Through the support of Feed the Future and its partners, Rwanda has begun an extensive program of hillside terracing to conserve water, soil and fertilizer. This helps to enable farmers to better feed their communities and promotes economic stability. Global Agriculture and Food Security also helps to reduce hillside erosion and helps to boost productivity.

ActionAid International Rwanda is a country program of Actionaid, an international anti-poverty agency working in over 50 countries, taking sides with poor, voiceless people, communities and with like-minded partners worldwide to end poverty and injustice together. ActionAid is a non-partisan, non-religious development organization that has been working in Rwanda as a full country program since 1997 to eradicate poverty and injustices with focus on tackling the root causes of poverty rather than just meeting people's immediate needs. The organization is primarily concerned with the promotion and defense of economic, social, cultural, civil and political human rights.

Many challenges remain for Rwanda. Although the government is pursuing educational and healthcare programs that bode well for the long-term quality of Rwanda's human resource skills base, Rwanda's fertility rate--averaging 4.6 births (2010 est.) per woman--will continue to stress services, and diseases such as HIV/AIDS, malaria, and tuberculosis will have a major impact on human resources. The persistent lack of economic diversification beyond the production of tea, coffee, and minerals keeps the country vulnerable to market fluctuations. The country's exports continue to lag far behind imports, and the weakness of exports and low domestic savings rates limit growth. Exports have increased (\$295 million for 2011), but Rwanda depends on significant foreign imports (\$1.3 billion for 2011). Private investment remains low, although investment insurance is available through the Africa Trade Insurance Agency, the Overseas Private Investment Corporation, and the World Bank's Multilateral Investment Guarantee Agency (MIGA).

Working with a multifaceted system of supports to change the structure of agriculture in the country, assist farmers with more productive seeds, fertilizer methods, and strategies to stop erosion, Rwanda can make significant strides in improving the situation for its citizens. My suggestion would be for educated agricultural specialists to continue to travel to Rwanda and teach the Rwandan people the farming methods that would be most efficient to address their situation. Encouraging people to work together and consolidate land would create farming situations most able to meet the country's needs. Plants that are drought resistant and a plan for increased irrigation may also make a significant difference. Another consideration may be to assist the people with livestock management, helping the residents gain another important food source that may be underutilized at this time. With help from other nations Rwanda could slowly emerge from the devastating poverty that has overcome their country.

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