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Ubumwe, Umurimo, and Gukunda igihugo, Rwanda's got it.

A nation in recuperation and improvement, within the last several years, Rwanda undoubtedly has taken its dire situation by the horns and is raising the bar for health, agricultural and educational standards within the country. However, this is no small task as the land-locked, poverty-ridden, country is still one of the poorest in Africa. (IFAD) Following the genocide in 1994, the economy failed to operate and rapidly deteriorated. With the sweeping number of deaths, collapse of infrastructure, and failure to maintain vital cash crops to the economy's well being, it led to the dramatic fall of its Gross Domestic Product. (Affairs) Since then, it has been on an upward climb; this country shadowed by tragedy and conflict shows a gleam of potential. To continue the reconstruction of infrastructure and agricultural developments, it is necessary for education, training, and extension to be implemented with help from foreign aid. Short-term solutions are no longer passable and must be taken a step further to bettering the Rwandan community for the long run. To aid in developing a self-sustaining population is the ultimate objective. Now is the call to action for able countries, including our own, to give this country the assistance it needs now to provide its citizens with healthy living conditions for generations to come.

William S. Gaud first coined the much-idealized idiom of a "Green Revolution":

"These and other developments in the field of agriculture contain the makings of a new revolution. It is not a violent Red Revolution like that of the Soviets, nor is it a White Revolution like that of the Shah of Iran. I call it the Green Revolution." (Gaud)

The "Green Revolution" is in reference to the rapid transfer of research, development and new technology measures being implemented world wide, focusing on third world, high poverty level countries with the assistance of foreign aid. It is a necessity to get the people of Rwanda the knowledge of more modern, efficient methods of agricultural practices. So far, students from Rwanda have been placed all over the world to study at various universities and places of higher education Schools are being reopened and modernized to keep up with the times, and the general standards of living are being increased. With education being a top priority of the Rwandan government at the moment, giving it the backing it needs to show our support is essential. While formal education is being developed for the youth, it raises a still more pertinent issue of the current agricultural situation. Rwanda currently has an estimated population of approximately 9.7 million at an estimated growth reaching 12 million by 2015. (IFAD) How many of those people will receive the scholarships to grant them the opportunity to take classes over seas, much less to attend their own Universities...many, but not enough. Rwandan agriculture contributes up to 90% of Rwanda's workforce, much of whom are minimally educated. (Affairs) Modern technologies and methods have been developed and can be used to fully utilize the land; the technology and research is out there, it is a matter of educating the Rwandan population on the new developments in order for them to implement the new methods into their farming practices.

Rwanda is situated between several different countries including Uganda, Tanzania, Burundi, and the Demographic Republic of the Congo. It is a land-locked country in Central Africa. Rwanda is an agricultural-based economy lacking any abundance of a particular natural resource or specific industry. The country's main sources of income are cash crops - coffee and tea - and the increasing tourism. The climate of Rwanda is well suited to grow these two major crops however, a major problem is the rapidly decreasing farm size among families; most are subsistence farmers, some of which make less than the equivalent of one American dollar a day. In 2005, 1.4 billion people lived on a \$1.25 or less American dollars a day. (Monitor) Rwanda faces geographic boundaries such as the rough terrain and land's

corrosion and lack of technological advances. (IFAD) These issues are causing roadblocks in their agricultural development.

As with most agriculture-based countries, average households are generally larger compared to those in the United States, or other service-based countries. After the genocide, many children were left orphans and a substantial amount had to take over as heads of their household. Many women at the time were left as widows and took the role as a head of the household supporting their family singlehandedly. Their access to health care is improving following the Rwandan Rural Housing Programme which "clustered" the scattered, countryside population into villages, or *imidugudu*, by rebuilding housing into strategic locations where water, electricity, schooling, and security (in addition to the implied health care advantages) could be provided more easily by the government. (Terreblanche) The recent shift in housing arrangements throughout Rwanda has changed many aspects of daily life for some. For example, community living makes the exchange of different foods and products between households and businesses easier. However, because many farms are subsistent, they make very little income. The majority of their needs continually fail to be met because of this extreme poverty.

It is an impoverished country with difficultly maintaining its people's needs, much less selling excess exports. Increasing awareness of more efficient farming methods is what the majority of Rwandan people need. To know better, more efficient methods, means greater production, greater income, and a more balanced life-style. Even though most families in Rwanda do business in agriculture and might meet their families basic needs in terms of food, nutrition and getting a well balanced meal isn't always an option. They have little to spend on other goods needed by their family, including other parts of their diet that aren't met by their particular farm. Increasing the average household income is one of the target objectives established by the Rwandan government in the Millennium Development Goals to be completed by 2015. (Monitor)

To help those making below poverty-line income in Rwanda, many methods have already been set into work. This includes research and the development of 18 varieties of a type of rice hybrid.

For the first time, many farmers were able to produce enough rice to feed their families and turn a profit at the market. Diversification into other products has become a reality for many, and long-sought-after conveniences such as indoor plumbing, beds and mobile telephones have been made possible thanks to the proceeds of NERICA.

In addition to that, micro-credit has been used in examples of countries such as Nepal, which was used to stimulate small businesses. However in this situation, the barrier in micro-credit is both allocating the funds for it, and the lack of prior education made available to Rwandan farm workers. While they might be driven and skillful at what they do, first educating the citizens on how to use the funding and using it to its fullest capability is vital. (Monitor) I talked to a student at William Penn University who comes from Rwanda and will plan on moving back after completing his education and internship at Musco Lighting Company. A point made in the interview with Bosco Nkurunziza, was that, once home, he said, "I will probably be working for myself." Bosco is double majoring in Industrial Technology and Applied Mathematics. Compared to the United States, white-collar work is much more a rarity than the everyday agricultural dependant family. A serious problem is that the uneducated in Rwanda is often found in the agricultural field as in most cases across the world. This can be because of many reasons, some of which might include that the majority of people working on their farms are not those who can leave. Either they were not provided with the schooling opportunity to learn and apply for scholarships or they needed to stay to help with labor work. To improve agricultural methods and get the knowledge about those methods to Rwandans, it will take something more than micro-credit. IPAD President to the African Union leaders stated, "Change must be cultivated from within." (IFAD President)To educate the masses in Rwanda is to educate the farmers.

Education is a right that all people should have access to. A typical student in Rwanda will complete their primary schooling (75.6% completion rate as of 2010). The number of students attending universities from 1963 to 1993 has since grown 96% -from 1,900 then, to over 44,000 graduates today. This is almost entirely due to the numerous Universities that have since been reopened since the genocide; education is a top priority for the Rwandan government. The dramatic increase in graduates since schools have been made available to students shows that it is not a lack of ambition but a lack of opportunity. Recently switching their primary language in education systems throughout Rwanda to English shows they are looking to a future in international relations and are preparing for well standing amongst the countries. (State) While formal education is being offered and continually bettered, there are many ways in which the system is still waiting for results. One of these is their adult populations education.

Currently, seventy percent of adults in Rwanda are illiterate. (State) This is just one place that might be overlooked. This might explain the widespread difficultly of families to understand current technologies and developments. When they do not understand, their farms stay in a state of disarray and fail to turn profits that can supprt the livelihood of a family. There are ways to help small-subsistence farmers boost their efficiency, productivity, and overall livelihood at the same time. The developments and methods are being improved all over the world, it is now a matter of educating those who do not have access to that information. The problem is that a formal education system will not work for the majority of Rwanda until it is fully developed and cycled through a generation. Those adults now, who are lacking in education, are attempting to support their families through their only known livelihood, agriculture. These are the people we need to start reaching with this information. This proves a task when the majority is unable to read or write. The answer is Oral teaching, (seminars, training sessions)... it has worked and can work all the more for the people of Rwanda. Better yet, this provides a community of people who want to learn, which is shown by the formal education turn around. One example of this communitybased volunteer effort is Thailand in the 1980s, in less than a decade they managed to reduce child malnutrition from 50 to 25 percent. This was achieved through targeted nutrition interventions and creating a widespread network or community volunteers to help change the people's behavior in the process, preventing malnutrion. The volunteers reached a ratio of 1 for every 20 household. (IFPRI)

The method of volunteer-based support from the people of Rwanda, to the people of Rwanda can create a community effort to improving agriculture for the benefit of the people. The volunteers received extensive training to learn about things such as monitoring child growth, educating caregivers about the best ways to breastfeed and conduct complementary feeding, offering prenatal care, and providing other basic health services. It is not what they learned that the focus is on in this example, it can be interchanged to provide a network dedicated to agricultural development and method awareness all the same. This system of a community-based effort with volunteers can work both quickly and effectively. When funding programs such as this, the Thai government reasoned that investing in nutrition was not in fact welfare, but instead development and were able to integrate nutrition into Thai's National Economic Social Development Plan. (IFPRI) This situation in Thai doesn't stand alone, from 1990 and 2002, China was also able to reduce malnutrition among the child populist from 25 percent to 8 when aided with the continuous family-interventions and training periods. This can happen on a small or broad scale and it can be focused on any particular situation the community needs assistance with. This system has also been used in cases of improving gender equality by providing a group network or women and providing them with training and resources. (IFPRI)

What can this lead to? The volunteer based 1: 20 ratio is only the beginning. As a nation with a much different culture, environment, *everything*, we have to put the system into place and let the rest be taken into the hands of the citizens who know their land best. Eventually, and with promise of creating a self-sustaining program, run by Rwanda -for Rwanda, it can be encouraged to Rwandan government to set up a system such as our Cooperative Extension System Offices. (USDA) As with the program at William

Penn and Musco Lighting, the government saw that it was working and is now sending ten more Rwandans over to get an education at this university. Once the government sees a program working, it is more likely to put their funding into it if it is working for the people's best interests. While we cannot force our methods of agricultural on Rwandan culture, for it is likely to be met with immediate hesitancy and tension, we can suggest methods for the taking. We can guide them through the organization of our Cooperative Extension Service and even through Iowa's own federal laws and guidelines of extensions offices, training, etc. With the Rwandan Rural Housing Programme just being finished, this is the time to start. They have just created a community network of people in closer range making meeting, organizing, and really uniting under a common goal that much easier. 90 percent of their workforce is dedicated to agriculture; agriculture is the common goal.

While the international learning opportunities are wonderful and will benefit Rwanda in the future decades to come, it cannot be left in the current status of poverty for any longer. This community effort can immediately be put to work and start to spread the developments of agriculture to improve the people of Rwanda's well-being. The "backing" in Rwanda by the government shows that big things can happen, and given the recent success rate of educational programs it shows Rwandan people are ready to take on the responsibility. Knowledge and awareness should be made available to those who want to learn. The is Ubumwe, Umurimo, and Gukunda Rwandan motto igihugo, Unity, Patriotism. (Japan) Through this program, the communities of Rwanda would embody all three. As a foreign nation coming in and trying to tell them how scientific agricultural methods are better than their traditional agriculture methods would much more likely be met with hesitancy – and perhaps for good cause. The Rwandan people know their environment best, so having a network basis of Rwandan citizens, means the methods and training are all relevant to what can be put to work. For example, a Rwandan extension officer gets met with a problem and is able to assure them, "Oh sure, we just had that problem a few weeks ago about four miles away. Here's what we figured out would fix it. Here's what's working now." Those sorts of suggestions and learning methods will be met with more openness. This program would also meet several growth targets in the Millennium Development Goals but primarily eradicating extreme hunger and poverty, doing this by expanding awareness of agricultural methods. To educate the masses in Rwanda, it would take an effort on the part of the community. No one can force this change upon them but the people must seize the opportunity as it is presented to them. We must make sure those opportunities are made available. Education isn't a luxury but a right of all people.

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