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Educating Farmers in Afghanistan

It would be hard to imagine being one of the billion people worldwide who suffer from chronic hunger every day? It's hard to believe that we live in a world so incredibly technologically advanced, yet one sixth of the population is not able to acquire enough food for even three small meals a day. To put this in perspective, Three times the number of people who died in the terrorist attacks of September eleventh dies each day from starvation. In addition, There are over fifty countries which suffer from food insecurity. Afghanistan is one among many, but its situation is perhaps the most complex.

A typical subsistence farm family in Afghanistan averages seven children, bringing the family size to nine. Of these seven, usually most are illiterate except perhaps one or two male children. Even then, the sons can hardly read and write. They live on a small farm averaging around seven acres. Seven acres is less than two football fields, hardly enough space to grow enough food to support nine people and make a profit, especially if they own grazing animals. The staple foods grown by this family include wheat, rice, meat and milk. Bread is a part of almost every meal, making wheat an essential crop. Since this family generally lives on two dollars a day, buying extra seeds or equipment to improve their farm is virtually impossible. Subsistence farming does not supply all the family's needs. Without education, farming systems remain primitive and other family members cannot find jobs off the farm to supplement income.

Until the country was plagued by over four decades of civil war, Afghanistan was the breadbasket of central Asia. Many Afghans were forced to leave their homes to save their lives and their family. Those who stayed were left in the middle of violent wars; numerous farms and lives were taken daily. Agricultural knowledge became lost or displaced, causing a dearth in agricultural education. Mass poverty then erupted because Afghans rely so heavily on agriculture. Eighty percent of the workforce participates in agriculture. Many problems hinder agriculture, but lack of agricultural education is perhaps the most complex of the many issues that need to be addressed. For example, Afghanistan's climate is very arid; most cultivated land gets little to no rainfall. The majority of water comes from snow melt from the country's many mountain ranges. The challenge comes collecting and utilizing this water. Only forty percent of farmland is irrigated even though there is tremendous potential for harvesting the water. The most common way to irrigate is through diverting water from streams toward a community. The community then splits up "water entitlements" throughout the village based on a complicated hierarchy. This leaves most farmers without proper access to water which hinders crop development. The Taliban have been purposely destroying irrigation systems so they can use hunger as a weapon for political power, sending poor farmers further into starvation. This issue can be addressed with investment in infrastructure and security. More challenging is giving farmers access to education on water quality, management, and the correct time to irrigate to optimize the water they do receive.

Afghanistan's rivers are flowing with unprecedented energy and irrigation potential. If systems were constructed there would be a steady supply of water throughout the entire growing season. Harvesting this energy through hydroelectric power in the off- season could potentially power the entire country, plus surplus to provide another profitable export (Bellinder, et al). There is an educational issue here as well; people need to know how to build the most efficient irrigation systems. Another problem exists in finding donors to provide money to invest in these systems. International investors do not want to finance major projects because of the purposeful sabotage by the Taliban. Why would they invest money if the product is just going to be destroyed? Micro financing would be an option to increase the use of irrigation systems throughout Afghanistan. This would not be solely committing investors to the systems, but putting the responsibility of the payment of the loans on the farmer as well. This would give farmers the opportunity to increase their yields to pay back the loan, and then maybe even take out another small loan for machinery, hybrid seeds, or storage facilities to keep increasing profits. This is a relatively simple solution to a complex problem.

Educating farmers is the major challenge in Afghanistan, but it is the key to making progress. There is a lack of teachers due to the decades of fighting. The government has little money to increase the salary of existing teachers, so talented people are attracted to non- governmental jobs for higher pay. Students are without committed teachers, and therefore are not properly educated, making the latest knowledge impossible to reach farmers (Bellinder, et al). According to the Library of Congress, fifty- seven percent of men and eighty- seven percent of women were illiterate as of 2006. Of those few who are literate, less than two- tenths of a percent were pursuing a higher education. This may be due to a lack of primary education; only eight million children are currently enrolled in school, of this only three million are girls. A survey done by the Afghan Ministry of Education illustrates that in some province the student to teacher ratio in primary schools averages at 71:1, some classes reaching as high as 185:1. Imagine a single person teaching one hundred and eighty-five children kindergarten through twelfth grade; the quality of learning is significantly decreased. But there is hope. According to Pamela Hunte in her study on “Household decision making and school enrollment in Afghanistan”, many extremely poor households continue to place high expectations on education as a way out of poverty and, rather than require their children to work, they send boys (and to a lesser degree, girls) to school in the hope of a better future.

The illiteracy of farmers leads to a lack of knowledge of efficient farming practices, such as pest identification and control, fertilization, and the latest hybrid seed varieties. Fruit crops such as grapes, apricots, apples, melons, tomatoes, and pomegranates are very well adapted to the climate, but the infrastructure for producing and exporting these cash crops was severely damaged during the wars. Unfortunately, the most popular cash crop now is opium poppies, grown and sold illegally on the black market. Farmers are often victimized by corrupt Afghan government officials, the Taliban and warlords. The Taliban and warlords in the south control poor farmers and their land, forcing them to grow poppies for profit. The poppy smuggling causes resources to be drained from the formal economy and competes with demand to grow food crops. According to an interview with Secretary Vilsack from the U.S department of agriculture, “\$2,500 per hectare is generated from the sale of poppies. But if that same hectare was put in table grapes, it could be as much \$18,000. If it’s put in apples, it could be somewhere in the neighborhood of \$3,000 to \$4,000 per hectare.” The farmers who are not controlled by the

Taliban need to be educated about the financial benefit of selling crops other than opium poppies.

Once the little food a typical Afghan family reaps is harvested, they need to learn to process the perishable foods to add value. High value fruits and vegetables are harvested every year, but without proper storage or processing thirty percent of these are spoiled before they even reach the market. Insects destroy what they try to save so there is no excess for when there are shortages due to drought or infertile seeds. Also, because there is little access to refrigeration in Afghanistan, the crops get sold to Pakistan where Afghan farmers receive the lowest market value. Pakistan then refrigerates the crops and sells them back to Afghanistan at a greater price when the market is more competitive. If farmers were taught proper storage and processing techniques they would be able to sell their food for a higher price.

Educating farmers about these practices could be achieved by implementing a training program for Afghan farmers. Potential educators from Afghanistan could be sent to various universities around the world to learn about farming techniques specific to the needs of Afghan farmers. This hands-on training program would be important because it is not only necessary to have knowledge, but to be able to apply that knowledge to actually solve problems. After going through the training program, they would sign a contract committing to work to train subsistence farmers in Afghanistan for a minimum of two years. If they agree to this contract, they would earn a high salary for those years. If they do not fulfill the requirement, they would have to pay back the organization for their training. The stable pay would give educators an incentive to teach. Language barriers between educators and farmers would be virtually non-existent since this program would be taking educators directly from Afghanistan and sending them back. Although it may be more cost-effective to send outside specialists into Afghanistan, the facilities and resources provided by universities around the world would be extremely beneficial. The educators would not only have one professor to help them, but entire departments. Libraries and technology would also enhance their education. Funding could be obtained by non-governmental organizations or private entities such as the Bill and Melinda Gates Foundation. For protection of Afghan farmers, the US military, which already has a strong presence in Afghanistan, could also be taught proper farming practices so they can teach Afghans how to farm, this would help with protection from the Taliban as well. There are programs currently in progress similar to this now. According to Afghanistan and Pakistan Ambassador Holbrooke in an interview for the United States State Department, “There are five agricultural development teams – National Guard from Nebraska and Texas and California and Missouri and one other state that slips my mind right now – and so that is directly related to security”. If these programs could also provide small rural towns with shared equipment such as tractors, simple irrigation pumps, seeds, or fertilizer, it would help Afghan farmers to further increase their yields.

Educating women need to be an essential part of this training program as well. Religious law prevents Afghan women to be taught by men. The rights of women in Afghanistan are very limited, which hinders the development of the entire nation. Muslim extremists have gone as far as throwing acid on young girls on their way to school. It takes a great deal of bravery for an Afghan to send his or her daughter to school. How can a country move forward if half its citizens are left behind? According to the U.S Department of State, “Investing in girls’ education is the single most effective development decision a country can make. Beyond doubling the skilled

workforce, this investment results in healthier young women, delayed marriages, and healthier children in the families that these educated young women create.” Programs are being developed now by the State Department to increase personal security and quality of education for Afghan women through both recruitment and promotion of women, as well as training on gender-related topics for men with the Afghan National Police and Afghan National Army. Although millions of women use micro-financing to improve their lives, this is not enough. Women need to be trained in the agricultural workforce. The state department has begun attending to this need as well, “We are currently training women in agricultural production and animal husbandry, veterinary medicine, and poultry breeding. Ongoing programs provide women with skills in using farm machinery and in creating small businesses based on agriculture. Women are active participants in our agricultural programs which provides economic opportunities and expanded access to financial services for micro-enterprises and small to medium sized agri-businesses.” These educational programs need to be strengthened in order for Afghanistan to prosper.

Afghanistan’s government is very supportive of educating teachers because it is seen as a crucial step in improving the country’s human capital and economy. The government contains two ministries responsible for higher education, the Ministry of Education and the Ministry of Higher Education. According to a study conducted by Jeaniene Spink, teacher training is a key component of all education programs for the Afghan Government. The most recent national constitution of Afghanistan stated that education was the right of all children and that the government would be responsible for providing basic education (that is up to grade 9) to all children of Afghanistan. To provide teachers to educate, the Teacher Education Program was created with help of donors such as UNICEF, USAID, and World Bank. The TEP has created various programs to give opportunities for accelerated learning for people who have started school but taken a year or more off, formal school, home-based school, and literacy programs. In January of 2010 USAID reported to have made progress, but had not completed its two main goals in “Building Education Support Systems for Teachers Project” projected to end in May 2011. 50,600 out of the target 54,000 teachers had received training and are now working for the Ministry of Education. USAID requested and was granted more funding for this project to continue. Children complete their general schooling, they can then go on to pursue a higher education in agricultural education. Since agriculture is such a huge part of Afghanistan’s economy, starting from primary schooling agriculture classes should be built into the curriculum. The Ministry of Agriculture and Ministry of Education should provide a joint program to educate children about correct agricultural practices. Financially, foreign aid will not fund these programs forever. Aid from organizations such as USAID, UNICEF, and the World Bank are not long term commitments; they usually give the financial momentum needed to get programs started and expect the country to take over once their contract is up. This is not always reliable because the country is not able to financially support continuing the program. In Afghanistan's case, I believe there is the potential to create enough capital for the government to fund educational programs. The country could sell natural resources such as fresh water or hydropower to neighboring countries, or increase production and exportation of profitable fruits and vegetables that are well adapted to the climate. The profit made by these could fund various programs.

Once people are educated, a strong link needs to connect farmers with educators to pass along the latest research. Dr. Robin Bellinder from Cornell University, traveled to Afghanistan in June and made this observation: “Now, there is greater potential for increasing production for multiple vegetable and fruit crops, but before production can be increased basic production knowledge has to be transferred to the growers. There’s a critical need for more, what we would call extension educators.” These extension educators would provide the link needed to help answer simple problems of Afghan farmers. A barrier to knowledge reaching farmers is communication. Roads, also severely damaged during wars need to be improved. This would help information and research travel faster and further to reach the many rural farmers. Expansion of land line phones has virtually stopped, but cell phones have been introduced and a new railroad is being built from Mazar-e-Sharif north (a major vegetable production area) which will connect with a cross- Asia highway. This allows farmers to be better connected to a competitive market, and to educators to help them farm and market their goods.

The vicious cycles of poverty induced by lack of education and lack of money has caused the situation in Afghanistan to worsen. Urbanization is occurring at a rapid rate because farming is becoming more and more unprofitable and unreliable. Village sizes are decreasing and cities are growing but have few jobs to give the larger population of rural immigrants. Since the economy is based on agriculture, the little industry there is in Afghanistan is based on agriculture as well. If there are fewer people in agriculture, industries suffer likewise.

Afghanistan is in need of many agricultural and infrastructural improvements, but the foundation for each is education. Knowledge must reach small farmers so they can improve their farming techniques and increase their yields. Farmers need to adopt practices such as fertilizing, proper planting and harvesting, crop storage and protecting their crops against pests and disease. As of now, most farmers only know what they have learned through experience. The literacy of the next generation must increase so they can be trained in colleges and universities. The government or outside aid must set aside money to pay teachers a high enough salary to support themselves. Money must be invested by the government and outside resources to educate farmers and improve infrastructure. Without education, the economic state Afghanistan will continue to worsen. Improving the lives of small farmers will not only improve their livelihood, but the livelihood of the entire country, making Afghanistan the breadbasket of Central Asia once again.

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