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Improving Agriculture within the Lives of Tongans

Roy Gerber is a father and husband living in Tonga. Roy's family consists of his nuclear family as well as some of his extended family. It is not uncommon in Tongan families, for extended family to live with one another, this results in families that can get quite large. Roy and his wife Maile have three children, Paula (8 years), Lata (6 years), and Ivo (4 years); Roy's youngest sister Felila (19 years), who is expecting her first child also lives with Roy and his family. Roy is the oldest son, therefore making him the head of the house and owner of the land on which his family lives and cultivates (the land is past down from the father to his oldest son and so on). Roy's home is made of wood walls, metal roof and concrete floors; there are two bedrooms, a small living space and a kitchen. Roy's home does not have plumbing, so they do not have a bathroom. Drinking water can be found in concrete tanks, distributed about the country. The roles in a Tongan house hold are determined by gender and age, males will be expected to work the land, growing and harvesting crops. The females are expected to cook (gas stoves are used for cooking), clean and care for the children. Subsistence farming is the way of life for many Tongan families including Roy's. Roy and his wife, Maile (when she is done with her house chores) works many hours on the farm growing mostly crops like coconuts and bananas, root crops are also commonly found among the farms. When the children are not at school they too work on the farm, doing lighter work like harvesting crops, while the parents weed, and tend to the garden as well as harvest crops. Roy and his wife work long hours with the sun beating brightly down on them, the soil from the earth sticking to the sweat on their arms and face. Roy's back hurts often from continuously having to lean over to weed and harvest his crops. From all her manual labor Maile's once soft delicate hands are now tarnished with calluses and a thin layer of dirt that never seems to go away. Felila has taken on many of the common women's roles in the house, while Maile has taken to mostly helping her husband with the garden. Felila takes care of Ivo, since he is still too young to attend school; she also takes turns cooking with Maile. Roy and his family eat mostly fruits, vegetables, and fish caught from the coastal waters. Although families like Roy's do farm to sustain themselves it is often not enough and many heads of the house, like Roy, are unemployed and cannot afford to buy food. The unemployment rate of Tonga is 35.9% (this includes the total number of unemployed and subsistence workers in Tonga). Even with the governments help life for the Tongans is difficult, they are often not well educated, have little food, and are just struggling to survive. Tonga has been unsuccessful in producing enough food to market, as well as providing job opportunities to sustain their economy. The first step to bettering their nation is to educate Tongans about agricultural products and techniques that can be implemented to increase productivity. Another step Tonga would need to take is to promote higher education. 65% of Tonga is made up of humble farmers (mostly subsistence farmers), without the knowledge or skills to help their country develop. Most of these unemployed citizens like Roy do not think they can find a job, so they continue to stay unemployed or remain subsistence farmers. Without a stable economy Tonga will continue to struggle to provide food and proper education to its citizens.

The first thing Tonga must do to improve their country is improve communication and transportation. Due to lack of communication, as previously stated, many unemployed citizens of Tonga are so because they believe there is no work available. This is not necessarily true. Within one of the local markets or perhaps in a news paper information on local job opportunities should be available. The citizens of Tonga wish to work and make money but are discouraged by the lack of awareness made about job opportunities. Another improvement that should be made is better transportation. Many Tongan suffering from illness or injury do not go to the hospital because (a)they do not have the means to travel the distance to go to the hospital or doctor (b) they fear they do not have the funds for medical attention (more job awareness should lower these statistics). Providing some kind of public transportation to the

people of Tonga will not only help with increase in citizens finding and going to work but also help citizens have proper medical attention.

Tonga has an increasingly growing gap between its rural and urban areas. While the rural areas remain engrained in their past customs, the urban areas are moving forward and becoming globalized and less concerned with tradition. This means that the small number of people living in the urban areas are beginning to start small nuclear families and going to better schools. Although this is an improvement, education needs to be wide spread amongst a nation to truly promote growth and development. Education is compulsory for ages six through fourteen (primary schooling). The government operates 99% of the primary schools and 44% of the secondary schools. In the urban areas 66.5% of Tongans had a secondary education and 16.9% a tertiary education; while rural areas only have 61.5% Tongans in secondary education, and 8.2% a tertiary education. 28.6% of the population only had a primary education. The higher education opportunities presented to the citizens of Tonga reflect the jobs its country needs. Schooling is provided for teacher training, nursing and medical training, women's business, and agricultural studies. Although Tonga tries to improve by providing these schooling opportunities, most post-secondary education is pursued abroad. It is clear that Tonga is dedicated to education and helping its country develop, causing Tonga to slowly but surely move forward in development.

If Tonga can decrease the number of subsistence farmers and instead increase the number of commercial farms they would be one step closer to a better country. The few commercial farms that are present have been decreasing in exports due to competition with other more productive countries. The largest market is in exports of squash to Japan; coconuts and root crops are exported to New Zealand and Australia. Promoting commercial agriculture will not only provide work for rural subsistence farmers (who will then hopefully no longer need to farm to feed themselves but be able to purchase food for their families, also in turn helping the economy) but it will also produce more products to sell overseas. The promoting of commercial farms will also mean a need for an increase in knowledgeable individuals who can effectively run the industry. Agriculture is more than planting, watering and weeding; agriculture is learning and acquiring the technology to grow crops more efficiently; and this is just the farming and/or production phase of agriculture. There is another equally essential part of agriculture and it is the business aspect of agriculture. Agribusiness is the production, processing and distributing of agricultural products.

Implementing the education to teach the individuals of Tonga, like Roy, how to run an effective agricultural business will improve both the amount and quality of food, while providing these individuals with an income to buy the food. Although Roy and his family are subsistence farmers they do not have the skills or the means to protect their crops from certain pests and diseases. A disease such as leaf blight, that destroys root crops, would be disastrous for Roy and his family, seeing as how root crops are a staple in Tonga and other South Pacific countries. Roy would not have any way of preventing this blight from destroying his crops leaving him and his family without food or means to buy food. Roy is a hard working man who will do anything to protect his family. He knows that the risk in being a subsistent farmer with no job is dangerous as well as foolish; so he did the only thing he could to support his family, get a job at a commercial farm.

Tonga is situated at 15°S - 23° latitude 173°N - 177° N longitude, which lays on the International Dateline. Tonga's geographical position provides a perfect growing climate to service both the northern and southern hemispheres with export crops during winter months. The more venues Tonga can sell their agricultural exports to the more the economy and agricultural business will flourish. Roy and his family will fare much better now that they are engaged in commercial farming. Eventually the development of the Agricultural industry will support more widespread urbanization. Demographically, population growth should begin to decrease along with death rates due to rising urbanization. With more education and medical care women will begin to have fewer children. With the rising urbanization women are given more educational and career opportunities, abandoning their role as house wife and embracing a new role

in society. Due to this shift women will be more career oriented therefore starting their families later in life, giving women only the opportunity to have one or two children instead of three or four. Thanks to Roy's shift from working his family subsistence farm to working at a commercial farm his daughters will be part of this shifting demographic trend and more so his grandchildren and great-grandchildren .

The first thing Tonga must do to improve their agricultural sector is to encourage subsistence farmers to join the commercial farming work force. This can be done through a number of ways; the most effective in my opinion would be to provide a good amount of pay for a fair amount of work. Job stability should also be ensured to make the rural farmers feel safe and secure in the new work environment, giving them confidence that this job will provide a steady income that will allow them to provide for their families. Another way to implement this transition from subsistence to commercial farming is the government can make a land grant program similar to that of the Homestead Act of 1862. This would involve rural families getting land from the government to promote more family commercial farms. Small family farms have an advantage in early-developing countries because the extended population growth has made land per person limited. With small farms comes low labor costs, and more family workers to supervise hired work to ensure sufficient work is being performed on the crop fields. Family commercial farms are very ideal for a country akin to Tonga because of how large their families can be. Productivity growth in small farms can promote poverty reduction through cash crops, further urban employment and income growth. This will start with an increase in profitable farm outputs, and more family farm employment.

The government should also provide schooling on agriculture technology and biotechnology for future commercial farm workers. Over time with the continued growth of the country the education and skills such as these will be needed to move into the next stages of development. Acquiring this knowledge will help the commercial farms be able to produce more food for less money, land, time, and energy. More efficient harvesting techniques and watering systems can be acquired. Also pest and disease resistant plants can be used to secure steady productivity, something that has been lacking in previous years. The innovation of new technology can even spread to the fishing exports which are also popular in Tonga. Instead of relying on catching fish out of the ocean, aquaculture, the cultivation of aquatic animals such as fish and shellfish in a natural or controlled marine environment, can be introduced. With aquaculture you can better manipulate the environment of the fish you are growing to promote and speed up growth. This will allow the country to maintain a steady flow of fish exports without having to worry about over fishing in oceans or oil spills killing millions of fish the country depends on.

The second issue the Tongan government most improves is its export market. To better ensure that larger countries such as Mexico do not decrease the export market the government needs to look into joining a corporation to help increase export sales. This would mean selling Tonga's export crops to a distributor for a certain amount of money; they would then sell the crops along with other countries goods and return the earning from the sale back to you. This process will ensure Tonga's exports are being sold and money is made to support the growing economy. Through the recent implications of the Millennium Development Goals which were created in 2000 by the United Nations marketing should begin to become less of a problem for developing countries. These goals were created to help poverty and hunger, education, equality, child mortality, health, the environment and development. There are 8 Millennium Development Goals, the 8th goal discusses how to create a partnership to promote international trade. "Target 8.A calls for the development of an open, rule-based, non-discriminatory trading and financial system. Target 8.B addresses the special needs of the least-develop countries, specifically including tariff and quota-free access for least-developed countries' exports." In putting these recommendations into practice I truly believe Tonga will begin to flourish into a strong developing country. Other countries have invested in Tongan education, such as Australia. Australia and New Zealand gave Tonga a 14 million dollar grant to help improve the schools of Tonga. Each country's generosity helps bring countries like Tonga a step closer to a more developed and successful country. Also the more countries that abide by the Millennium Goals the more likely less developed countries will increase trade, profit,

and their overall economy. Through a better economy there will be more money for education. More education in the agricultural field will lead to more mechanization. This will in turn lead to an increase in urbanization and fewer rural neighborhoods. By adjusting a few policies and implementing new tactics a domino effect of events come from it. Although I do not see huge changes in Tonga's development happening within the next four years, given sufficient time she will prosper. There is no doubt these events will lead Tonga, and countries like it, into a new millennium of economic success.

Bibliography

Background Note: Tonga

<http://www.state.gov/r/pa/ei/bgn/16092.htm>

Family structure

http://www.tongaholiday.com/?page_id=4169

Geographic information

<http://www.wpro.who.int/NR/rdonlyres/195D984A-8E57-4C15-AD36-57AD2AF355E9/0/CPTON.pdf>

Making agriculture a growth sector

<http://www.adb.org/Documents/Reports/PSA/TON/chapter8.pdf>

Millennium Development goals

<http://www.mdg-trade.org/>

Promoting market access

<http://www.ifad.org/gbdocs/gc/26/e/markets.pdf>

Root and tuber crops

http://aggie-horticulture.tamu.edu/extension/texas crops/root_tuber/index.html

Tonga 2006 census of population and housing

http://www.spc.int/prism/Country/TO/stats/pdfs/Census_2006/TONGA%202006%20Analytical%20Census%20Report%20Vol2.pdf

Tonga

<http://www.eua-island-tonga.com/tonga.html>

Tonga – Agriculture

<http://www.nationsencyclopedia.com/economies/Asia-and-the-Pacific/Tonga-AGRICULTURE.html>

Tongan Culture

<http://www.eua-island-tonga.com/Tongan-Culture.html>

Tongan customs

https://wiki.familysearch.org/en/Tonga_customs_and_research_ideas

Tonga health

<http://www.nationsencyclopedia.com/Asia-and-Oceania/Tonga-HEALTH.html>