

Elijah Blare
Winner High School
Winner, SD

Egypt, Factor 1: Diet Diversification

Egypt is an old country that had been very prosperous in the past because of the River Nile. Egypt, for being so old, still has a lot of poverty and that is surprising because Ancient Egypt was a very rich country. A lot of Egypt's poverty comes from not having good diet diversification. Another factor that adds to poverty in Egypt is the lack of water. The last factor that adds to the poverty of Egypt is the high Agriculture import tariffs. The factor that was chose to research in Egypt is Plant Science.

According to Ruth Warren "about half of Egypt's people live in the countryside" (2011). The country people live mainly in small villages which are along the Nile River or near irrigation canals. Each village has a mosque, a few shops, a religious school, and sometimes a church. In the country, both men and women work in the fields while the children tend the animals. "The staple foods are bread made from corn flour and a dish made of beans, called ful, where the meat is usually reserved for special holidays" according to Warren, (2011). According to Food Government Index, (2015) "A measure of post-harvest and pre-consumer food loss as a ratio of the total domestic supply (production, net imports and stock changes) of crops, livestock and fish commodities, in tons in Egypt is 6.7. The world average is 5.4."

The city life in Egypt is vastly different from the country life. For example, there are broad, paved streets and well-tended parks. "Another thing that is different is that most secondary schools and all universities are in cities," according to Warren, (2011). Most people that live in the city live in either modern apartment buildings of private homes in the suburbs as well as crowded tenant districts. "The midday menu may include rice, vegetables, and lamb, broiled pigeons, fish, or poultry the meal usually ends with a tiny cup of strong, black Turkish coffee." according to Warren, (2011).

There are two systems of education in Egypt, one is public and the other is private. "The adult literacy rate for 2004 was estimated at about 55.6%, with 67.2% for men and 43.6% for women," according to Thomson Gale, (2007). One thing that is a challenge for Egypt is that not a lot of people know how to read and write. "Although eight years of education are required, girls and women tend to receive less education than boys and men," according to Gale, (2007). One thing that is ironic is that Egypt is home to Al-Azhar University in Cairo which was established in the 900's and is considered by many people to be the oldest university in the world. Also nearly all Egyptians have access to health care.

Some main crops in Egypt are rice, wheat, cotton, sugar cane, sugar beet, broad beans, soybeans, Egyptian clover or berseem, citrus, primarily oranges but there are some grapes, stone fruits and pome fruits, tomatoes, and potatoes. This information will help you understand what the Egyptians eat which is mostly starchy foods.

In Egypt, "there is around 4.6 million head of cattle, there is also 3.9 million head of buffalo in 2006," according to Warren, (2011). Warren, (2011), "also found that the sheep population reached 5.4 million head, while the goat population exceeded 3.9 million head in 2006. The camel population was about 120 thousand head, while horses and asses exceeded 3.2 million head in 2005." Small farmers who do not own agricultural lands or control agricultural holdings are the main source of animal production. One agriculture practice that the farmers use is what is called a cover crop which they use to feed their animals and put nutrients back into the ground. Some things that make it hard to grow crops in Egypt is the lack of water and the pests like nematodes.

The factor that was selected, which is Plant Science, affects the food quality because if there is a more of a diet diversity then it would be easier to get the nutrients that you need. Also, because you have a more diverse diet you can choose to eat the food you like and still get the nutrients you need to survive and stay healthy. An additional thing that my factor would affect is food availability. The way it affects the food availability is if your country has more food diversity it would also have more of that food. What is being said above is that it is easier to have a good diet if you have good food availability and vice versa.

The Plant Science factor affects Egypt because the people in Egypt eat mainly starchy foods and do not consume a lot of meat. Meat is usually reserved for special holidays according to Warren, (2011). so by using plant science we can increase the amount of meat and protein sources to help with food availability and diet diversification. An additional way that the factor that I chose affects the people of Egypt is through the nutrition. If you eat mostly starchy foods it is hard to get protein and the right nutrients your body needs to function correctly. So having a good diet diversification helps with getting the right nutrients.

The wheat purchased by the government to support the subsidy system is predominantly imported. This high-cost system creates an unsustainable fiscal burden and the wastage it creates undermines long-term food security Lauren Power, (2014). What is stated with the above quote is that the situation is so bad that the government is stepping in and trying to help. Plant Science includes the division of diet diversification which is getting worse. One of the ways we know it is getting worse is because the government is involved. If this factor was improved, then Egypt would most likely have some product that their country could use.

Some other major issues that could affect the factor would be water scarcity, erosion, and climate volatility. The water scarcity would affect the factor because without enough water certain plants and animals will not grow then you cannot introduce different plants and animals into the country. Several things effect the water situation in Egypt they are population explosion, inefficient irrigation, pollution, and regional upheavals. According to Amir Dakkak “Egypt uses over 18,000 miles of canals and sub-canals to push out into the country’s farmlands adjacent to the river” (2016). Because of all of the canals are open the Egyptians lose as about as 3 billion cubic meters of Nile water per year through evaporation. Another thing you could do is to start water treatment plants to purify the sewage water before it goes into the Nile. You can also make some other way to dispose of the toxic industrial waste. One thing you have to worry about is the population explosion.

Egypt’s population is growing at an alarming rate and therefore is stressing the water supply. The way to fix this problem would be to find or get more water somehow. Because of political strife, neighboring countries are seeking to gain more control over the rights of the Nile. The second issue that would affect the factor would be erosion because if the top soil is gone then nothing will grow there and so animals cannot live there. The third and last issue that would affect the factor would be climate volatility and it would affect my factor through the types of plants that could be grown and the types of animals that could live there.

The Egyptian Government’s food subsidy system masks the full extent of food insecurity. The government supplies ration cards to 80 per cent of the population, allowing quotas of specific foods to be purchased at subsidized prices according to Lauren Power, (2014). The main thing that makes the food they currently have nutritionally insufficient is poor management skills and inadequate feeding. For example, a lot of times they don't harvest the grain when it is at its highest nutritional value. Specific nutrients that

many people are deficient in include vitamin A, iron, calcium, iodine, selenium, and zinc. To help meet these needs, possible improvements would be to have golden rice, lamb, more green vegetables, cranberries, Brazil nuts, and spinach.

The main thing that makes the food they currently have nutritionally insufficient is poor management skills and inadequate feeding. For example, a lot of times they don't harvest the grain when it is at its highest nutritional value. I would recommend that they try to find some way to better manage the water that they do get. One way to do this is by replacing all of their canals with underground pipe and any dams they could put in underground aquifers. Some ways to help with the diet diversification would be to try to find other plants and animals that could not only live and thrive there but the plants also must produce the nutrients that are needed in that country. One of the only ways to find these plants and animals is through trial and error just like Norman Borlaug did. Another way that they could help would be to help them to better manage their land. The way they would do so is have classes to teach the natives when to harvest the crops to get the best nutritional value.

The government has made progress in reducing poverty among the poorest Egyptians. But 20 percent of Egyptians still fall below the poverty line. That means that they earn or consume less than they need to achieve adequate nutrition, shelter, medical care, and other necessities. The more serious threat to Egypt's food security is long-term, however. Egypt already imports 60 per cent of its food needs and this figure is likely to rise as Egypt fails to increase food production in line with population growth. One thing in the favor of Egypt's economy is that they have several strong resources to draw upon. These include energy resources, income from the Suez Canal, and a profitable tourist industry.

While the agricultural plains of the Nile have long been famed for their fertility, only 3.5 per cent of Egypt's landmass is potentially farmable. The remaining land is either desert or cities. Agricultural production is concentrated along narrow strips of fertile land adjacent to the Nile. Population growth and urbanization are now encroaching on Egypt's already limited fertile areas. Efforts to reclaim land from the desert to counteract this trend are restricted by the need to secure sufficient water supplies.

It is very important that the Egyptian Government accepts that it is no longer in a position to bully upstream states into forgoing their water entitlements. Ethiopia's persistence over construction of the Grand Ethiopian Renaissance Dam or (GERD) in the face of vehement protest and obstruction from Egypt, demonstrates that refusal to cooperate with upstream states won't work. There are considerable benefits for the region if upstream water infrastructure projects are pursued. GERD will become the 'battery of Africa', supplying energy to neighbors for development projects. With improved irrigation, parts of Sudan and South Sudan could become major food producers. By refusing to take a seat at the table, Egypt rules out the possibility of mutually beneficial outcomes.

Relying heavily on trade to support domestic food supply exposes a nation to two vulnerabilities. First, global food prices have been highly volatile in recent years and shocks in world prices can feed into the domestic market. Second, for reliance on imported food to be sustainable beyond the short-term, a healthy fiscal position is required. A major cause of the rise in Egypt's food insecurity over the past decade has been exposure to global food price spikes, which have threatened domestic supply and pushed up prices. Over 80 per cent of households have reported having to resort to eating cheaper, less-nutritious staple foods to cope with higher food prices. If resource scarcity and import-dependence continue to push food

prices upwards, more of the population will come to rely on food subsidies. This will add to the government's fiscal burden and further jeopardize the viability of the subsidy system.

As recently as 2013, the Egyptian Government struggled to maintain crucial grain stocks as economic conditions threatened its ability to pay for food imports. In early 2013, grain stocks fell to a record low of only three months' supply, as foreign currency reserves plummeted. Only emergency financial support from Saudi Arabia, the United Arab Emirates and Kuwait saved the government from a balance-of-payments and food supply crisis.

Diet diversification is a problem in Egypt. Plant Science, being the study of plants and how they grow would help diet diversification. If this is incorporated correctly, it has the potential to help solve nutritional problems of the people of Egypt as well as financial and other issues that are caused by the lack of diet diversification.

One of the challenges found when researching Egypt was finding articles that were about modern Egypt not ancient Egypt. Another challenge was following instructions and finding out how to do this paper. The biggest obstacle when making this project was just making the time to do the research and the project.

Bibliography

Dakkak, A. (2016, January 04). Egypt's Water Crisis – Recipe for Disaster. Retrieved July 18, 2016, from <http://www.ecomena.org/egypt-water>

EI-Sherif, M. (1992, November). *Egypt*. Retrieved December 2015, from <http://www.fao.org>: <http://www.fao.org/docrep/v9978e/v9978e0e.htm>

El-Nahrawy, D. M. (2011, July). Country Pasture/Forage Resource Profile. Egypt. Retrieved December 10, 2015, from <http://www.fao.org/ag/AGP/AGPC/doc/Counprof/Egypt/Egypt.html>

Limited, T. E. (2015, December 10). *foodsecurityindex.eiu.com*. Retrieved from Global food security index: <http://foodsecurityindex.eiu.com/Country/Details#Egypt>

Morales-Correa, B. (2015, October 25). *Life in Modern Egypt – a study in contrasts*. Retrieved January 2016, from <http://all-about-egypt.com/>: <http://all-about-egypt.com/life-in-modern-egypt-a-study-in-contrast>

Power, L. (2014, July 29). *Death on the Nile*. Retrieved January 2016, from <http://www.futuredirections.org.au/>: <http://www.futuredirections.org.au/publications/food-and-water-crises/1826-death-on-the-nile-egypt-s-burgeoning-food-and-water-security-crisis.html>

Warren, R. (2016). *Fast Facts: Egypt*. Retrieved January 2016, from <http://www.scholastic.com/>: <http://www.scholastic.com/teachers/article/fast-facts-egypt#to>