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"Understanding Trends in Global Nutrition: The Paradox of Hunger and Obesity": East Asia

Introduction

China comprises over 90% of East Asia's land and over 85% of the area's population. The country's influence is felt in all of the other nations of this part of the world, because many of the peoples there originally came from China. Confucianism is the strongest example of Chinese influence; this philosophy forms the basis of Asian beliefs on sincerity, honesty, personal, with a family, community, and even government, though it is not a religion in the traditional sense as most people think. Confucianism is a philosophy based on the teachings of Chinese scholar Confucius (551-479 B.C.), a man who emphasized the ethic of reciprocity, or the golden rule. He also taught his followers to be virtuous politicians; men who he believed could influence their subordinates into acting equally good if they themselves lead a clean and honest life. With over one and a half billion people, one fourth of the world's population residing, East Asia is a major force in our world today.

This is not to say that all East Asian nations comply willingly with the Chinese way of life. Japan, for example, has adopted a democratic form of government, while China is still Communist (since 1993, Japan has been ruled by the Liberal Democratic Party, and has such similarities to United States style democracy as a two house congress and political parties). Furthermore, Taiwan is still in controversy as to whether or not to remain part of the Republic of China, become part of the People's Republic of China, or form its own nation called the Republic of Taiwan.

East Asia, being so populated, has over five times the international population density average, at 601 people per square mile. Issues of overcrowding and poor food distribution abound and though China leads the world in production of many agricultural commodities, the nation struggles to feed all the people.

Malnourished of East Asia

The malnourished of East Asia are comprised mostly of low-income children. Of the children under the age of five in East Asia, 19% are moderately to severely underweight, 6% are moderately/severely wasting, and 24% of these children are severely stunted. Causes for these problems vary. In the Philippines, protein energy malnutrition or PEM deficiencies are the leading cause of malnutrition among the populace. Twenty-eight million people are unable to buy food for themselves. In China, malnutrition is caused largely by iodine deficiency disorder, or IDD, which is prevalent in poorer areas of Asia and Africa. IDD can cause mental retardation and is especially harmful to children. Thirteen percent of the world's population is affected with IDD, which is treatable with iodized salt. China is a very typical example; it is a nation large enough to have both affluent areas where over half of the population is overweight (such as Beijing) and desolate areas where over 39% of all infants are underweight (such as in the province of Hainan). Stunting in China is much the same; in Beijing, only seven percent of the population experiences growth stunting compared to 56% in the province of Guizhou.

One must always bear in mind that obesity is a form of malnutrition; it has many different causes and many devastating effects. Obesity-related illness affects over 115 million people in the developing world. By the year 2030, these diseases are projected to be the number one killer of the poor.

Family Life

Family life in East Asia varies upon country. In China, the average family is composed of a mother, father and one child (by law, couples can only have one child, except in cases where a farm is involved and the extra labor is needed or in minority households). The average age for marriage in China

is between 25-30 years old, and the couple usually takes up residence in a small apartment, where the male assumes the dominant role in the household. The average Chinese family consumes lots of vegetables, such as bok choy and gai-lan, white rice, and seafood. Americanized Chinese cuisine is much fattier and the emphasis is more heavily placed on meat than in actual Chinese cuisine.

In Taiwan, the situation is similar to that in China; men are the financial providers and the heads of their respective families. Almost this entire small island nation is urban with few natural resources. The Taiwanese have learned to be resourceful with the source of food they do have--the sea. Seafood is a staple of the Taiwanese diet, and many traditional dishes (cuttlefish soup, shrimp cookies) contain a form of it.

Being an island nation, Japan is similar to Taiwan and China in that the population eats much seafood, but their entire diet is centered on white rice with anything else in the meal being considered a side dish. The Japanese family usually consists of a mother, father, and one to two children. In Japan, there is high emphasis on marital status, and a family, not an individual, is recognized as the main unit of society by the government.

Food Production/Agriculture

Food production in East Asia varies greatly from country to country, though over three fifths of all Asians are employed in some form of agriculture. China, having much rich farmland, is able to produce a high yield on many crops such as rice and wheat. China ranks first in the production and fifth in exports of rice largely because most of the rice produced goes to feed the people of China. China ranks first in rice consumption worldwide. According to the United Nations, only 5-19% of the Chinese population go hungry each year. The Chinese also have a thriving corn yield; they are the second largest growers of corn in the world, second only to the United States.

The situation is much different not too far away from China, however. In North Korea over one third of citizens live on farms run by the Communist government, and yet 57% of these people don't get enough food to keep them healthy. The often unpredictable weather and political unrest in North Korea make it extremely difficult to produce crops and/or import and export food. In the 1990's, terrible flooding and the end of trade agreements with China and the Soviet Union crippled North Korean agriculture and the economy as a whole. Relying on insufficient food rations, many North Koreans went hungry. Today the country is still rebuilding from the depression of the nineties using agricultural technology to be able to provide the food that will keep the country running.

As mentioned previously, the island nations of East Asia have almost no natural resources and must rely heavily on imports of food. Only 25% of land in Japan is fertile enough to grow crops, such as rice, apples, wheat, and barley. Due to Japan's high population density, the population cannot provide enough rice to feed itself and must import rice from other nations. However, the abundant access to the ocean makes nutritious fish readily available to the Japanese in a fresh and safe form. Japan accounts for over 15% of the global annual catch. Though it may seem as though Japan is struggling because there aren't enough farms to feed the nation, it is a country with one of the highest qualities of life of any in the world. Japan has a 99% literacy rate, and 96% of Japanese high school graduates go on to college. Japan is also the seat of Asian industry. It is the home of such great electronics manufacturing corporations as Nissan, Toyota, Honda, Sony, and Toshiba, to name a few.

Agriculture in Taiwan accounts for only 2% of the country's gross domestic product, down 33% in the past fifty years. The rocky shores and overpopulated plains regions of Taiwan make the land virtually inhospitable to crops.

Mongolia, one of the hungriest nations of East Asia, is ironically the most agriculturally centered. This poor country (avg. GDP of \$420 per capita) exports petroleum, coal, and copper, as well as cashmere, minerals and food products. Furthermore, Mongolia has a steadily improving economy since joining the World Trade Organization in 1997 and settling \$11 billion debt with the Soviet Union in 2004.

The typical East Asian family may find it hard sometimes to make ends meet, but will rarely starve. It is much more likely that a family will acquire PEM or IDD from the lack of nutritional quality of their food. The poor distribution of food can make it difficult to feed the enormous population of East

Asia, and countries like North Korea rely on aid from the United Nations to this day. Food production in East Asia could encounter other difficulties as the population continues to grow although unpopular policies such as the one child law in China may help avoid deter these difficulties.

There are currently over one hundred million farms in Asia, covering over half of all land in the continent. Most of these farms, however, are less than one acre in area and are solely used to sustain the family that farms the land there. On these farms, one could find cassava (a starchy vegetable low in protein often grown in poor areas where PEM affects almost everyone), rice, sweet potatoes, wheat, or yams and maybe a few hogs, cattle, sheep, goats, or chickens as well.

If our sample East Asian family lived on one of these farms, they would be much more likely to survive totally off of their own crops, such as those mentioned above. A family trying to survive on those types of produce has a much higher risk of developing PEM or IDD; hence, food transportation is still important, because these people need protein sources and iodized salt that they aren't getting off of their own land. This is where the problem of food distribution comes into play in these developing nations, such as North Korea. The lacks of modern transportation technologies and of monetary resources cripple these farm families' ability to purchase food and nutritional supplements.

Over the past twenty years, Asia has shown the greatest agriculture production growth rate (4%). This growth can be attributed to the funds and research dedicated to agriculture in the area. Luckily for Asians, this research continues today. For example, in China, low natural resources and soil fertility are the main constraints on modern agriculture. In response, such techniques as organic manure fertilization, intercropping, and rotation cropping(intercropping is when more than one crop is grown on a particular plot of land at one time, and rotation cropping is when one type of plant is seeded for one growing season, and another for the next and so on).

In Korea, high-input agriculture is the trend. High input agriculture is when many chemicals are used to produce the highest possible yield, with no regard for organic methods or intercropping. As Korea quickly became a more industrial nation, the labor force moved away from farming and into the better paying jobs in urban areas, and thus, farmers were left to produce the same amount of food with less food producers than before. High input agriculture was the most efficient and effective way to combat this farm labor shortage in Korea.

The correlation between improved food production and improved quality of life for the people of East Asia, but it's not so simple. On one hand, producing more food does not necessarily mean more food for all people. In developing nations, higher paying jobs must become available to the general populous, and more emphasis needs to be put on road and railroad quality so that the food may reach the people. On the other hand, high input farming puts the land, people, and wildlife at risk. Chemicals runoff can contaminate drinking water supplies for people and livestock, and possibly harm wildlife as well. From an economic standpoint, high input agriculture costs the farmer a lot of money in chemicals, and can raise prices for consumers as well.

My Recommendations/Conclusion

Based on my research, the only solution I can see is for the United Nations to come forward and solve the obvious food appropriation difficulties in East Asia. Greater emphasis needs to be put on transportation and distribution of food into low-income areas. This could a) provide jobs to these areas driving trucks, packaging food, or operating machinery, and provide more money in each household to purchase food, and b) bring food to the masses, especially iodized salt and protein sources, to help stop such preventable disorders as PEM and IDD. Many nations are barely scraping by, and trade agreements with larger and more developed nations must be met in order for these countries to take in the food exports that they will sorely need someday soon (and in some cases, such as North Korea, that they need today).

National governments need to take responsibility for themselves and their people, and yet be open to any offers of aid from humanitarian organizations. Further, those nations with agricultural bounty need to share that not only with the hungry in East Asia, but around the world. It is time to share the food production expertise of the developed world with those nations that are struggling to feed their people.

We as an international unit must band together to fight hunger, malnutrition, and obesity not only in East Asia, where over one fourth of our world's people live, but around the world. Those of us in the developed nations of the world need to realize that there is a food surplus in our respective countries, and that by attempting to better distribute that food, none of it has to go to waste. It is a shame to see so much food thrown out in America when there are hungry people around the world needing quality food. All the times our mothers told us to finish our dinner because there were hungry children in (insert country here), she was right. There is no reason that children should have stunted growth or adults should suffer from and iodine deficiency or a vitamin disorder when all it would take is a simple supplement, readily available to those of us in the developed world at our local grocery or drug store, to cure it.

Bibliography

- <u>"Agriculture."</u> World Book Online Reference Center. 2005. World Book, Inc. 27 Sept. 2005 http://www.worldbookonline.com/wb/Article?id=ar033520>.
- Chapman, Graham P., Richard Louis Edmonds, Abraham Marcus, and Jonathan Rigg. "Asia."
 World Book Online Reference Center. 2005. World Book, Inc. 27 Sept. 2005
 http://www.worldbookonline.com/wb/Article?id=ar007880>.
- China. Wikipedia. 26 Sep. 2005 http://en.wikipedia.org/wiki/China.
- <u>Micronutrient deficiencies</u>. World Health Organization. 26 Sep. 2005 http://www.who.int/nut/idd.htm
- Sivin, N. "Confucianism." World Book Online Reference Center. 2005. World Book, Inc. 27 Sept. 2005 http://www.worldbookonline.com/wb/Article?id=ar129220.
- <u>Taiwan</u>. Wikipedia. 26 Sep. 2005 http://en.wikipedia.org/wiki/Taiwan. Trede, Larry D.
- <u>Technology assessment and transfer for sustainable agriculture and rural development in the Asia-Pacific Region</u>. Food and Agriculture Association of the United Nations. 26 Sep. 2005 http://www.fao.org/sd/RTdirect/RTre0019.htm>.