

Lane Bangasser
Grundy Center High School
Grundy Center, IA
China, Factor 5

Global Warming in China

“Is climate change a conspiracy or crime?” Many people are wondering the same thing. Climate change is a huge issue for our entire world and has been since about the turn of the century. It is certainly a source of worry and stress in the agricultural powerhouse of China. Many farmers and citizens of China are worried about what is going on with the climate. The saddest part of it all is they can't fix it; they can just do things to try and slow it down. Citizens who farm for the government receive very little compensation, so when crops go bad as a result of factors beyond their control there is little to no income. Growers in China are faced with a serious issue because greenhouse gas emissions are not limited under the terms of an agreement made in 2001. A study suggests that China's emissions are actually 20% higher than reports published by the government. In 2007 China passed the United States as the largest emitter of carbon dioxide according to the US Energy Information Administration. China is also the highest emitter of greenhouse gases according to the same source. Chinese citizens see the effects of this ongoing issue. The sea levels are rising, the glaciers are melting, and the air quality just keeps being degraded. The implications of climate change impose serious setbacks on global health and will continue to hinder economic development. China, being the leader in emissions, will see the effects on both the economic and social platforms. China is already experiencing the environmental impacts of climate change. Surface and ocean temperature have risen severely as of late as well as sea level. Rising sea level is especially relevant to China because they have a very long and densely populated coastline. When the ocean level rises one-meter in China it takes away 92,000 square kilometers of shoreline. (Harvey)

In China the average family size is three people. That is about the same as the United States. In America we have 2.66 people per family. (Harvey) Some might think this is low, but it factors in every United States citizen and there are a lot of people living alone out there. A typical Chinese diet includes a lot of vegetables, fish, and other seafood. Most Chinese citizens tend to stay away from sugar or foods high in fat content. The reason this is significant is because all these things have to be grown. Climate change affects growing season and yields, so climate change is an issue. Farmers in China do not make a lot of money, so the reality of it is if there is a bad growing season the family is in trouble. Often times farmers in China farm for the government. There are many reports about government farmers getting fired because they are so hungry they have to eat the little yields they get and don't turn anything into the government. The education system is run by the state system of public education. Citizens must attend school for a minimum of 9 years. This is significant because the youth in China are getting a good education in my mind. The only problem is that when kids are in school for so long they are not able to help on the farm very often. China, for lack of a better term, has an inadequate health care system. They are ranked 188th out of 191 countries in health care equity. (Clarence-Smith) The worst part to me is that the Chinese government is well aware of their disparity in health care distribution. A sad example occurred in 2006. A boy from the village Guangan ingested pesticide. The young boy was denied treatment when the family couldn't manage to get 800 yuan. (\$100 dollars) The funding for health care was cut by the government. A doctor can be consulted for a few dimes because they need money to pay the bills. (Clarence-Smith)

There are many products that agriculturists in China produce. They include: rice, wheat, potatoes, sorghum, peanuts, tea, millet, barley, cotton, oilseed, pork, and fish. The average income in Beijing, China is only \$9015.16 U.S. dollars annually. (Zuyana) You might think that seems extremely low, but the cost of living there is very low as well. There is stable food production in rural areas, but that isn't the case in urban areas. As far as employment in China they have a very low unemployment rate; as of

January 2013 it was only 4.3%. (Zuyana) Still there are things that are going on in China that have the citizens frightened. One alarming theory is that China is likely to face an inadequate food supply by 2030 if the climate change trend continues. The Chinese agricultural sector already struggles greatly due to climate changes. One such crop is winter wheat. This particular crop grown in Northern China often dies in cold temperatures because it has grown so accustomed to warm winters over the years. Climate change has a great effect on many families in China because of irregular growing seasons. An example is rice. China is the world's leading producer of rice and it makes up over half of China's total grain output. It helps that China has 4 different rice crops with 4 different growing seasons. The problem with that is a typical family would only grow during one of those seasons so their income would suffer is the "off-season". Rice cultivation is highly strenuous which is why families only usually participate in 1 growing season.

There has also been an alarming rate in climate related disasters. Rates of droughts and floods are going up very fast in China and global leaders don't know how to stop the issue. They have grave consequences when they do strike for both the natural environment and the infrastructure. With China's significant population this always threatens many lives. Climate change is scary for the families living in poverty in China because of the uneven distribution of freshwater resources. Sharp increases in temperature would almost stop agricultural production in Northern China. The reason for that is they use evapo-transportation to get their water from the southern part of China to the northern parts. (Leblond) This is because the southern hemisphere of China usually has an over-abundance of rain but is sometimes washed away by floods. With shortages in water and a rising population, China is facing an issue. China is experiencing a water shortage, and most believe the climate is to blame. Along with a water shortage, climate change also has the power to increase transmission of diseases. In poverty stricken areas the citizens are much more likely to get these diseases, and they are also much less likely to be able to fight them off. People in these poor parts of the country complain that the government doesn't care if they die because they have a population problem anyway. There has been an ongoing debate over what China's responsibility in this situation really is. I think that the Chinese government's defense is that they aren't to blame for those living in poverty. It is something that they did to themselves along the way. Maybe they were born in poverty, but yet some of the richest people on our planet were born in poverty and thrived in that adversity.

There are not too many quick solutions to fixing or stopping climate change. We can try to do things to slow it down or deal with it, but we cannot stop it. Improving these conditions would drastically increase quality of food and income available for families. If climate change were to be slowed down then this would definitely preserve the environment's sustainability. I don't think that it would necessarily stop poverty, but it could reduce it. Farmers in China struggle if their crops don't produce because the temperature is too high. Population is only going to accelerate climate change. Often times it is the most populous places that have the worst air quality. Urbanization is also playing a big role in climate change. The more the people, the more the pollution. This is why China is facing such an issue because they continue to grow. Water scarcity is also a major issue already in China. If this continues to get worse China will have to look elsewhere for their source of drinkable water. I feel like China is having a hard time coming up with answers because they are trying to focus on how to stop climate change rather than just do things to try to slow it down or adjust their way of living to fit the changes. They are not going to completely stop global warming no matter how hard they try. The Chinese government is currently looking at options they can explore in efforts to slow down global warming. China currently has in place its 12th Five Year Plan 2011-2015. The goal stated within this plan is to limit the emissions and set achievable targets that have been communicated by the Chinese Government. In 2011 the emissions continued to grow strongly; however, new policies in 2012 changed the emissions trajectory to feasible goals. The new policies and structural changes established in 2012 will bring within reach the 3.5% annual increase in energy consumption necessary to achieve the electricity targets stated in the plan. Constraints have also been established to reduce coal consumption and steel making which would limit

coal combustion. Other Chinese policies call for the replacement of high-emission inefficient generators. They are one of the richest countries in the world and have plenty of money to spend for research. While it is hard to conduct experiments because they can't really predict the future, China looks at trends from past years and makes a hypothesis about what they are going to see in the future. All in all I think they are taking the necessary steps to try and make their air and soil as clean and healthy as possible. By doing so, they are setting the standard for other countries to follow.

Climate change and food security are inter-related. China has 19% of the world's population and just 7% of the world's farmland. So establishing a safe and sustainable food system is a problem that is staring China right in the eyes. To improve food security the Chinese need to focus on every aspect of the food chain, from good farming practices to availability and nutrition to safety and waste reduction. Dupont is taking an active role in trying to fix this problem. Dupont has teamed up with Government and business partners to help China provide locally grown solutions that have long term sustainability. Dupont is also introducing 4,000 new products that will meet nutrition, sustainability, and safety needs by 2020. China is the first country to meet the "UN Millenium Development" goal of reducing the amount of people living in hunger and poverty by 50%. This is definitely a huge step in trying to reduce pollution which helps to slow down climate change. China is taking steps to become 95% self-sufficient in production of food while making it available, affordable, nutritious, and safe. Food prices nearly doubled from 2010 to 2012 and as a result of that hunger as rose dramatically as well. By the end of 2013 the world will have nearly 1.3 million undernourished people on the world. Sustaining food security has always been one of the most important goals for all levels of government in China. In the last ten years food prices have raised very slightly until the last 5 years where they have skyrocketed. Rural areas experience even greater price raises than urban areas. The price of pork rose 32% while the price of eggs shot up 22%. In response to the crisis China has increased the amount of money they put into agricultural investments. China increased export duties on major crops such as barley, wheat, and rice. The government also increased minimum prices for different varieties of wheat. Other agricultural inputs, such as fertilizer prices, have been introduced. Overall, China's policy response to the global crisis has been praised internationally. It has given the country viable options to explore in the food security crisis.

I think that it is a collective effort that needs to be handled properly. The communities, national government, corporations, and other government organizations have to all work together to accomplish their goals. I also don't think it will work if it's a drip effect. What I mean by that is all ideas can't start with the government and then work their way down to the communities. I think everyone needs to come together and share their ideas and decide on a plan of action that best suits everyone. Individual farmers will feel more empowered if they have a say in the process rather than having it done to them. Rural farmers are the ones that experience the effects of global warming and climate change first hand, so I think they are the ones who need to have a big say in what's going on. I feel like if the national government is making all the decisions that isn't necessarily a good thing. They don't get to see first hand what is going on and what these farmers have to go through on a daily basis. Although the technology being used to adapt to climate change is not necessarily new, the focus centers around utilizing resources that are already there. Researchers in China are focusing their efforts on water allocation, water saving, and sea-water utilization. Technologies that deal with the exchange of water among the atmosphere, soil, surface, ground-water, waste-water, and rainfall are being developed and extended. Making use of water saving and sea water recycling technologies will continue to be at the forefront of China's research.

As far as urban communities go I think that they play a vital role as well. They may not get to experience what the farmers and the government sees, but they are the ones that will feel the most severe repercussions. They are the consumers and the ones that are out testing the market and will feel the impacts. They are the ones who experience the everyday market. The prices will shoot up when there is high demand and very low supply for the products they want. **People need to eat, and the items can't be produced because of global warming and climate change.** An example we experience on a daily basis is

dairy. Dairy products are currently very low in supply and will always be high in demand. That is why there is talk that soon a gallon of milk will cost \$8.00 a gallon. Another example is orange juice. In Iowa we obviously don't have the climate to produce orange juice. Florida is a key producer of orange juice and if they have a bad season of growing, the orange juice will never make its way up here. That is why I think that urban citizens will feel the impact. I think that this is going to have to be an effort that everyone has to put in. This is not going to be handled by just the government or by the rural farmers.

In conclusion I think that China and the rest of the world has a crisis in front of them. The topic of climate change is a growing issue that in my mind has no solution. What I mean is that if there really is such a thing as "global warming" then there is no one stopping it. Peoples habits of today have polluted the ozone so much that the temperatures are slowly rising. You can't monitor what people do in their everyday lives so in that case there is no stopping the problem. There is, in fact, ways to slow this issue down. When I say that I mean that we can think twice before littering and other things that will harm our environment. The little steps by many go very far. This being a world crisis and China being a world power they need to lead the way for other countries. All in all they need to test solutions, work hard, and hopefully find a way to slow this down.

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