Marc Quezada Chicago High School for Agricultural Sciences Chicago, IL India, Factor 6

Agricultural Conditions on the Indian Subcontinent

In the life of an average American, no one thinks about the next time they are going to eat. They usually have a hard time deciding whether its pizza or hamburgers they will eat tonight, and would never worry about running out because of a local grocery store more or less than 20 minutes from their house. However, that is not the case in rural India. Currently, there is 72% of the 1.1 billion live and are mostly poor. They do not have a Jewel Osco that they can go to and pick up some corn.

The typical substance farmer in India is a very poor one. He sometimes has a family to feed and can't give them the food they need in order to have a balanced meal. The family probability would have a poor diet because of the lack of proper nutrients due to the lack of food. The farmer's family sons would have a very poor education, just to become farmers and get married, and maybe go to the city and get a job. The farmer's daughters would be treated very horribly and would suffer from malnutrition the most, since in Indian culture; they eat last and eat least. Also they would either get a worse education than the sons or, not even get an education at all.

What I believe to be the future in India's agricultural conditions would be education. Like an old saying, "Give a man a fish, he eats for a day. Teach a man to fish; he can eat for the rest of his life". I believe that these words are very true. According to UNESCO, this stands for United Nations Educational, Scientific, and Cultural Organization, reports that 66% percent of the population in 2001 was literate. That means that is 72,600,000 million people are able to read and write, and the literacy rate for women is 39% versus 69% for males.

What is needed is to provide education information about agriculture is to provide that education to the poor farmers and provide equal rights to women. Since some the farmers are located miles away, I believe, it would be very hard to provide that education. The schools there are sometimes pretty rundown and requiring financial aid. If a corporate organization would give the right aid then the schools would already be able to assist the rapid growing amount of children. Then the schools would have acquired teachers, that already know the proper techniques to farming or from other countries, and would not only educate the students and teach them what they need to learn, but they could also inform the village. They could hold public meeting in order to inform them proper water purification techniques, modern crop techniques, and how to use the technology properly.

Another thing that is affecting the lack of agricultural education would be the lack of equal rights to women. According to, www.thp.org, it states that women in India are worked more than boys and are forced to marry earlier than boys. Women undertake more tasks and those tasks are more grueling than boys would encounter. The women work in the hot sun on their knees while men work in the early morning where the sun isn't hot. The website also states that a man works for approximately 1,212 hours a year while a woman works approximately 3,485 hours in a year. Last it says that a taboo observed in India says that women aren't allowed to handle the plough.

According to http://www.npr.org/, it says that the progress being made in India is slowly heading toward disaster. It says that during the "Green Revolution" a loose coalition of scientists, government agents, and philanthropists were spurred into action by public concern. However, the term "Green Revolution" doesn't mean what it is today. Today, whenever you hear the term "Green" it means organic and pesticide free. Back in the 60's and 70's it meant to switch from natural old fashion ways to grow crops using

pesticide and high yield-seeds. This is bad because you can transition one way if growing crops and technology to another part of the world where it isn't being used and not expect some serious side effects. It is being said that the farmers have to "blitz" their crops with pesticide, and now the insects have become too resistant that they destroy large portions of crops anyways.

Another thing that can be improved would be the dependence on pesticides. The farmers in the Punjab region have increased their dependence in pesticides by 3 times. That means that they are buying 3 times the amount of pesticides they were buying in 60's to grow the same amount of crops. This has resulted in a lost of groundwater. According to www.npr.org, it has stated that there isn't enough rain water to grow the high yield-seeds they were given in the 60's. So now in order to keep growing the crops, they have resorted to digging underground wells. Now each year they have to deepen their wells some to 40 feet others to as much as 200 ft. below ground level. Last it is said that if they don't change the way they grow their crops that the whole district could have a modern day dust bowl. This would not only destroy the economy there, but it would also drive thousands out of their homes and it would potentially harm thousands also.

My recommendations in order to increase productivity would be to start all over again. Start planting the old crops again and stop using pesticides. I think this is one of the only ways because before they started using pesticides, they didn't have the whole not having enough water and digging wells before the 60's. Sure some people wouldn't find it acceptable, but this isn't their essay. Now after they have switch back, they would start using modern crops, but in small amounts. This is because if they just start growing the same amount they did before. The soil wouldn't be able to take it. After that they would use modified amounts of pesticide. They would because of they start using the same amount it would again start destroying the soil. Next they should get the help of modern day scientists. I believe this would help out a lot because the scientist would know what the soil needs and what crops to put there.

Another suggestion that I can make is for people to move to the cities. According to http://en.wikipedia.org/wiki/Agriculture_in_India, it says that there is an over population in India's rural country. Since India is the world's most populist country, and is going to be in the next future. It is obvious that there will be overpopulation. However, what wasn't known is that it would affect the agriculture community. According to the website stated, most farms in rural India are less than 20,000 m squared. This is very small. Now with a lot of people looking for work in the rural country where do you think they will work? If you said on farms, you are correct. If there is a large work force on a small farm then that would result in that piece of land being over worked, which this would also result in a growing unemployment and the low productivity of labor.

Now, how could this be solved? One theory would be that people could divide their farms even less and give it to a poor family in need of some form of money and work. This could result in farms being less over worked, because there are more farms. Also it would help feed a lot of the people that don't have anything to eat and it would reduce the rate of deaths in that certain area.

However, there would be several disputes to this method. One would be that a lot of farmers would be unwilling to split their farms even smaller to a family that doesn't deserve it. Since most of the farmers are already poor, dividing their farms would reduce the amount of money that that farm is going to receive. Which dividing would make the farmers poorer in the long run? Another thing is that the farmers would welcome these new farmers openly. Say a farmer had a farm that has been in his family for generations. Maybe dating back to Alexander the great time period, even though this is highly unlikely for the sake of argument let's say it is. Now, would that farmer be willing to give up that land for a stranger? I think not. I know I wouldn't. So that's another problem. There would be a lot of fights amongst the families which could lead to arrests or deaths. Another problem would be choosing which people would need the land and which people would not. This is a severe problem because some people could be having

a good job as a farm hand. Would it be fair for that person to give up what he likes? In a way, it actually would. It would because if that person likes being a farm hand and wants his own farm. Then shouldn't he get it? Maybe it would. However, it wouldn't be fair to give a person that has never worked a farm in his life his very own farm. That would not work at all because he would have no clue what the methods are, what kind of crops he should grow and what the seasons are for growing.

What we could do is to improve their transportation system. Since in India they have mostly dirt roads transportation has become a very important issue. An increasingly more popular way to transport goods is by ropeway. By transporting goods by ropeway, you could cut the transportation cost by half and decreases work. According to the article it is easier to send your produce by ropeway than to send it down naturally. This is because it takes a lot of work to transport, let's say potatoes on someone's back down a steep hill and in high altitude. The farmer could lose a lot of crops that way. Also it would be easier than sending it on a mule back also. This is because the farmer could lose a lot of his yield and the animal would destroy the quality of that plant.

So if there would be more ropeways across India that would solve a lot of problems. One problem it would solve would be, obviously, the transportation issue. Since there are a lot of hills in some areas of India, transportation is key. This is how a farmer would share his crops with the world. He doesn't share his produce than he won't make any money to support his wife and kids. Also, not only does it help the farmers but it helps the environment also. Sending a farmers fruit or vegetables down a rope is helps the environment better because it doesn't have any side affects to the environment. If you think about the other transportation methods, like road or rail, they have a negative impact on the environment. This technology is giving 2,000 families in the Uttarakhand providence rich dividends which would allow them to buy other goods, like cloths and etc. Last ropeways give kids that had to be taken out of school in order to transport goods, a chance to go to school and get an education.

Last, I think what America can do to improve India's agriculture also, is to gradually shift them back to organic farming. I think we should do this is because according to http://www.organicfacts.net/organic-cultivation/organic-farming/organic-farming-in-india.html India's land is slowly losing fertility and the inability to produce crops. Which this is increasing letting farmers get trapped in by money lenders that exploit them to no end and in the end many farmers that are trapped are committing suicide. Last the pests are becoming immune which forces the farmers to spray even more pesticides.

In today's world food market, organic food is becoming more and more popular. Millions of farmers and consumers are turning to organic foods because they are treated without pesticides and chemicals. This is good for the body because then the chemicals that where in the food aren't going into your body causing damage. This good for the farmers in India because then they can give the soil, which I previously stated was losing fertility, the ability to heal itself. Also in the world market, people are willing to pay that extra money in order to have something that is organic, and in U.S markets and European markets, Indian produce that was treated with chemicals is being rejected by many of the worlds markets. Helping Indian farmers can come in many forms. Whether it is to make reforms in education, make motions to provide equal rights, to reduce their dependence on pesticides, to what I called to "start all over again", to either move poor farmers to the cities or have farmers split their farms so more people can farm, or to improve their transportation system, or whether to switch farmers to organic farming. I sincerely believe that one or all can help India's several problems either tomorrow or several years from now.