Alexander King- International Experience India

This past summer I had the experience of researching with the Tata-Cornell Agriculture and Nutrition Initiative (TCi) in India. I was part of a team of Cornell students, making up the inaugural class of TCi summer interns. While they were all working with the Minimum Nutrition Dataset for Agriculture in Hyderabad, I was working on a separate initiative at the Tata Institute for the Social Sciences, or TISS, in Mumbai.

My work focused on researching the market based solutions to iron deficiency. With the prevalence of anemia and iron deficiency in India reaching over 50 percent for some demographics, different companies have taken to iron fortifying foods. With this research, I was attempting to get a better idea of what markets are doing to address iron deficiency, how big the market for fortified food products are, and see what products are being developed throughout India.

I was fortunate to have the associate director of TCi, Dr. Bhaskar Mittra, to help guide me in my research. The first few weeks at TISS were spent reviewing the literature on iron deficiency throughout India. I utilized government-collected data from the National Sample Survey Organization (NSSO) and the National Family Health Survey (NFHS-3) to get information on food consumption and expenditure. After getting a better understanding of what the national reports say about nationwide nutrient levels, I needed to understand the types of food people were consuming and how they were spending their money on food. In addition to the NSSO reports, I made trips to three types of food markets in different parts of Mumbai. I was also tasked with compiling a list of available iron fortified foods. This was done through both market visits and remote research through company websites. Physically seeing the foods people had in their shopping carts was beneficial to my work.
While in rural Maharashtra and Gujarat, I was able to speak with some small shop owners to see the types of food people in rural areas were purchasing as well. I even learned some typical cooking methods to understand how the way food is prepared could potentially alter nutrient content.

Once I had a basic understanding of the context in which I was working, I went back to the list of iron-fortified foods I had compiled to select four for in-depth study. The products represented a mix- two packaged snack foods, a widely used consumer product (salt), and a bio-fortified staple food. They are: Britannia Tiger Biscuit, Lehar Iron Chusti Puff, Tata Double-Fortified Salt, and Nirmal Seeds ICTP 8203 Fe Pearl Millet. The remainder of my time in India was spent arranging meetings with the Research and Development departments for each product. I was able to meet with three of the four companies to discuss their products and get more insight into why that type of product was selected for iron fortification, how effective it would be at addressing iron deficiency, and some basic market strategy. It was interesting to see that since much of the information is confidential, companies were only able to report on the basics.

This whole experience culminated in a report showing the information I collected throughout my time in India. This includes a list of known iron-fortified products available in the market, background information on the state of malnutrition and iron deficiency throughout India, and market information for iron-fortified goods- including the four product case studies.

Though honing my qualitative research skills was a great part of this internship, many other aspects contributed into making this an experience rather than just a work project. I had the unique opportunity to live, eat, and work at a local university. There, I met
many other students from all over India and other parts of the world. It was interesting speaking with other students about their studies and how they compared to universities in the US. Getting a first-hand glimpse into college life at TISS was one of the best parts of the experience- from hanging out with friends in the school canteen to working late nights in the library.

Living in Mumbai, a major city by any standards, gave me the flexibility to explore a more cosmopolitan side to India. In my free time, I would go to the various bazaars and markets, explore the city by (packed) train, and even sample street foods. I was even able to visit some of the museums and architectural sites throughout the city, which gave me a greater appreciation for its rich history.

Being in Mumbai also provided easy access to travel around India for both work and tourism. I was able to visit the Ajanta caves in Aurangabad one weekend, and then continued to Pachora for my visit to Nirmal Seeds Corporation. I also took trips to New Delhi and Hyderabad to meet with food companies and attend nutrition-related conferences. I was able to combine these meetings with seeing some of the cities, eating the local foods and visiting famous monuments. Additionally, I spent some time traveling around rural areas in Gujarat and Maharashtra. Seeing these different areas of the country helped me to contextualize my work. By the statistics (population, income, religion, language, etc), each state in India is totally different. Having an opportunity to see some cultural differences complemented this research. It gave insight as to why some of these variances in nutritional intake, household expenditure, and other differences occur. Actually seeing the rural/urban divide had a similar impact, that the numbers in government-collected data have a difficult time expressing.
The most rewarding part of this experience was having the unique opportunity to see development in action. Here I was, working with a very real, very timely project in India. Discussions on how to approach nutrient deficiency were taking place throughout the country as I was researching. As a researcher with TCi, I was able to see the different approaches and meet those responsible for making these decisions. I distinctly remember touring a seed company that just released a pearl millet with higher iron content. The next day, I was at a conference in a different city with the organization that invented the higher iron pearl millet, and was able to ask questions I had the day before. Seeing how the private, public, academic, and governmental sectors all interact and approach the same problem showed me why some initiatives are more successful than others, and made the linkages between various stakeholders much more apparent. This was very useful upon returning to Cornell, where I have taken these lessons and used them to help form my perspective on other issues.

Working with the Tata-Cornell Initiative gave me real research skills while also allowing immersion into another university and culture. After many new experiences, spicy new foods, and countless cups of chai tea, I returned to the US with a fresh understanding of the delicate linkages between market interactions, agriculture, and nutrition. The work I did with TCi was an ideal way to bridge the gap between in-class education and engagement with the material itself. I look forward to continuing this research throughout the coming year with Dr. Pingali and the rest of the TCi team.