When I accepted my internship with the Food and Agriculture Organization in Cuba at the end of March, I had inadvertently signed up for a lesson in patience as well. The plan was to begin working at the FAO’s office in Havana at the end of May. Unfortunately, there had been a delay getting my visa approved. What began as a minor inconvenience gradually became a question of feasibility. Shortly after “giving up” on my visa, I received a call that it had been approved. Within five days of that phone call, I landed in Havana on July 16th to begin my internship with the Food and Agriculture Organization in Cuba. Since my contract was significantly shorter, I was eager to make up for lost time and make the most of my five-week internship before returning to school in the fall. At Cornell University, I study International Agriculture and Rural Development. The opportunity to learn firsthand how Cuba’s agrosystem supports- or fails to support- its citizens was invaluable to my education.

Cuba’s agricultural situation truly is unique: the socialist Cuban government allows a mix of state, private, and cooperative farms to exist. Despite recent efforts to bolster national production, the FAO reports that 80% of all food is imported, often resulting in nationwide shortages when international markets fluctuate. Perhaps what separates Cuba from most other food insecure nations is its very low level of under nutrition: the Global Hunger Index gave the country a score of 4/100 in 2012. That being said, the systems that currently guarantee an adequate food supply are not economically sustainable, nor environmentally responsible. The development of under-utilized agricultural resources is critical to establishing lasting food security in Cuba.
Along with the other interns, my task was to analyze the current state of food security in Cuba, to identify barriers and challenges towards maintaining it, and to propose steps to ensure sustainable food security and establish food sovereignty. My portion of the project was to write a summary of the current status of food security in Latin American. Additionally, I was responsible for examining the utilization of food resources by five major vulnerable populations: young children, the elderly, handicapped persons, women, and specifically pregnant and nursing mothers. Cuba is applauded for its high quality social services, including healthcare and education, which are provided freely and equitably. While it is true that the government’s efforts to address hunger in vulnerable populations have paid off, there are gaps that still need to be addressed.

My main project, however, was proposing sustainable rice production methods in Cuba. Like many places in the world, traditional Cuban diets prominently feature rice as its main cereal crop. More than any other Latin American nation, Cuba supplies 62.3 kg/capita/year of rice, according to the FAO’s Food Balance statistics. Furthermore, 60% of the island nation’s precious freshwater water resources are used for agriculture, and 50% of that is used exclusively for the production of rice. Needless to say, a new system is needed to reduce the country’s dependency upon unstable foreign markets and produce enough of its staple crop to ensure food security.

System of Rice Intensification, also known as SRI or SICA in Spanish, is a set of agricultural principles that are applied to the production of rice to increase yields while reducing the exploitation of natural resources. There are four fundamental methods to employ under SRI that can be practiced by small farms with proper training. First, planting healthy rice seedlings early is crucial to avoid transplant shock. Farmers establish a grid of at least 25x25 cm for a
single seedling. Traditional transplants are older and more densely populated, which creates unnecessary competition between plants on the same hill. Throughout the season, it is important to maintain good soil health, typically through the application of organic matter. Finally, and perhaps most unconventional, is the drastic reduction of irrigation. Under traditional methods, rice paddies are continuously flooded, creating an anaerobic environment that rice can tolerate. However, researchers have found that rice plants thrive better with intermittent irrigation only when necessary, such as every three to seven days.

Conservation Agriculture (CA), the other agricultural system I am assessing, focuses on maintaining healthy soil. It provides a set of three main principles to guide farmers for better soil management and higher yields. Permanent or semi-permanent soil coverage is maintained throughout the season, which can boost soil structure and ensure a more stable level of nutrients. Another way to revitalize the soil is through crop rotations, which is the alternation of crops cultivated on the same plot of land in a successive cycle. CA believes in reducing tillage as much as possible. If it is feasible, no-till methods are encouraged to prevent further soil erosion and water runoff.

Alone, both agricultural approaches are beneficial to the environment, the farmer’s net income, and the sustainability of the participating communities. Our task was to synthesize the two methodologies for even greater success. Only limited research has been done regarding the combination of SRI and CA, and proposing a system that will be practical and sustainable is no easy feat. The next step, which I unfortunately will not be around to witness in person, is testing out which of the methods we proposed are feasible and affordable for the farmer to execute. If so, further research can be conducted and proper technical training should be distributed to rice growers.
As an intern with the FAO in Cuba, all of my work was to be written in Spanish. Upon arriving at the airport and meeting our driver, it was clear that the three years of Spanish I had taken in high school would not suffice. Initially, I struggled to communicate with locals and coworkers and depended on the other interns. It was tempted to speak in English with the other interns, but I found that I learned the language best by fully immersing myself in it. By the time I flew home, I felt comfortable having conversations with locals and chatting with the Cuban employees at the office. In fact, I believe that I would have been nearly fluent if I stayed for three months as originally planned. Most Cubans know a few words in English; I met a few locals that were studying English and were eager to practice in conversation. That being said, anyone interested in traveling to Cuba should be competent in Spanish, but fluency is not necessary.

Life in Havana was always a bit of an adventure, requiring flexibility and self-reliance. Thankfully, the FAO arranged housing for me while in Havana. I stayed in two different casa particulares, or rented rooms. The two host families were incredibly friendly and willing to let us into their lives for a bit. In my free time— which was plentiful— I visited museums, watched live performances, or simply sat along the popular street known as the Malecón. On the weekends, I would take an almendróne, or group taxi, to the beach a half hour away for only a few CUCs (roughly $5 round trip). Tourists are easy to identify and are occasionally scammed by locals. Women especially should be prepared to be heckled on the street. Overall, however, the vast majority of Cubans are straightforward and welcoming towards Americans. Even after five weeks in the city, I still felt that there was much to see.

One of the more challenging aspects of my time in Cuba was limited communication. The only place I used the Internet was the office. Although Internet was available at hotels, it was expensive— the price of one hour of Internet at the Hotel Nacional was equivalent to the
average Cuban’s monthly salary. Moreover, international phone calls were several dollars a minute. I kept in touch with my family in friends via Facebook and emails. Without Internet at the FAO office, it would have been extremely difficult to get in touch with my family.

Although my time in Havana has been brief, it has been enlightening to live under an unfamiliar political/economic system. Tasks as mundane as getting groceries are fundamentally different in Cuba versus the United States; rounding up ingredients involves stopping at numerous markets throughout the week. It is a regular reminder of the importance of organizations like the Food and Agriculture Organization. Statistics can only tell part of the story: engaging in the system firsthand inspires me to help find a solution to sustainable food security. My experiences, both at the office and exploring the streets of Havana, have reminded me to always keep an open mind for new ideas, and that good things come to those who wait.