

# **Farm to Table Program: Costa Rica**

R25 Funding Final Report

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With the current advance in transportation, interaction between people is ultimate. Along with that the disease incidence is no longer an isolated event. An outbreak of foodborne disease can affect multiple countries at a time. Farm to Table program highlights this issue and emphasizes the importance of understanding food production systems especially in exporting countries. The program was first initiated in 2009 by Dr. Armando Hoet, The Ohio State University and Dr. Scott Wells, University of Minnesota. Since then there has been an annual trip held to develop awareness, understanding and familiarity of the food system. I was fortunate to participate in the Farm to Table 2011 which took place in Costa Rica.

Costa Rica is a small country in Central America. It is bordered by Nicaragua to the north and Panama to the east. It is also surrounded by the Pacific Ocean to the west and south and the Caribbean Sea to the east. The location provides easy access to most parts of the world. Costa Rica is a mountainous country with different types of forest. Although Costa Rica is considered a middle income developing country it ranks well above its poorer neighbors. People in today's Costa Rica are mostly of European descent rather than mestizo origin which could be seen in other Latin American countries. Three percent of the population is of African descent and mainly Jamaican immigrant. The indigenous population is less than 1% of the total population. The weather in Costa Rica is either wet season from May to November or dry season from December to April.

In the year of 2011 Universidad Nacional de la Costa Rica partnered with The Ohio State University and University of Minnesota to host the Farm to Table program in Costa Rica. The program is a weeklong and included site activities as well as visits to dairy farms, dairy processing plant, extensive beef operation, poultry and beef slaughterhouses and supermarket. The program also incorporated discussion with leaders from government sectors involved in food safety regulation and public health issues. Most of the participants arrived to San Jose, the capital in the weekend before the start of the program. During the weekend participants toured in San Jose area, explored the city, tried different traditional food and practiced their Spanish.

The program started with a welcome meeting at the adventure hotel where most of the participants stayed. There were 5 of us from The Ohio State University; Dr. Hoet, Julie Brent, Lisa Kessler, Dixie Molenkopf and myself. After the meeting, we visited the Pipasa poultry slaughterhouse. Pipasa Company is the largest poultry supplier in Costa Rica. The slaughterhouse is equipped

with high technological machinery level. The plant is outfitted with modern refrigeration facilities to guarantee high meat quality. There are also sections for de-boning and vacuum packaging. In addition, Pipasa prepare customize cut and packaging for local stores and restaurants and they are also empowered to export. In recent years the company started to embrace animal welfare issues and recognized the humane handling of the birds. Our visit was by the end of the raining season but they mentioned that the dry season is a little bit of a challenge because the high temperature.

I realize that the slaughterhouse visit was a new experience for some of US veterinary students. In Sudan, and because of agricultural orientation for the veterinary medicine, meat processing and slaughterhouse is part of the students training in the school of veterinary medicine.

After lunch we headed to the veterinary national laboratories and the school of veterinary medicine. Each of these sectors gave us a tour to their facility and showed us their investigation process when there is potential concern in the food supply and explained to us how possible foodborne outbreak evaluated.

The program also involves visit to the Costa Rica's biggest food market supplier, Automercado. We were able to observe what behind the scene in the meat department and to see how meats are handled and process. The setting of the store is not much difference than most of the US supermarket which prove the influence of the US on Costa Rica current growth.

For the dairy side, we visited Dos Pinos dairy processing plant, and two dairy farms, the Rancho Verde and El Corso Farm. Rancho Verde is a high end farm. The cows are herd in a mountain grassy area. The farm is well maintain and super clean. The El Corso farm is a typical farm but with its good management it is really combatable. The farm has a John's disease issue therefore they have restricted calf management policy to prevent disease transmission to their calf. One of the main differences in disease screening between Costa Rica and United states is the Tuberculosis (TB) surveillance. In Costa Rica, dairy farms are required to perform an annual TB test for their cattle to maintain their TB free status if you have one and ultimately to prevent the spread of zoonotic TB from infected cow to human. In the United States TB surveillance is passive. If slaughtered animal inspection indicate any suspicion of TB then the confirmation test will carries out. When the test result is positive, then they use animal identification number to

trace the TB positive animal back to farm of origin where all the cattle in that farm will then tested for TB.

Dos Pinos has two dairy processing plants one in the San Carlos and the others one is in Coyol of Alajuela which we visited. The plant is the largest in Costa Rica and it processes approximately 500 thousand liters of milk per day. It consist of three areas; pasteurization, ice cream an aseptic packaging areas. Dos Pinos milk, cheese, yogurts and other products are available across the country and can be found in most of Cost Rica hotels, restaurants, and supermarkets.

Beef livestock in Costa Rica occupy a large portion of the land resources. It has significant economic and social implications. During our visit to Costa Rica we visited 2 beef farms; La Fortuna and Alturas del Tenorio farm. Cattle in both farms are raise in natural pasture but in Alturas del Tenorio farm cow are feeding 100% on pasture. We also visited bovine slaughterhouse, Montecillos. Montecillos is one of the most important cooperative enterprises and longest of Costa Rica. It is one of the most integrated of the meat industry. The plant has a capacity for 500 animals slaughtered in eight hours shift.

Our last tour visit was to the fish producing and processing plant. We visited Terrapez Company located in Cana, Guanacaste. The company product and process Tilapia. Ninety percent of their production is exported to the United State and the company follows the Food and Drug Administration (FDA) guideline to assure compliant with the US standard. During the last years the bacterium *Francisella* has been detected in their plant. The company experience 90% lost of their production due to mortality. Therefore, restrict policy are applied to avoid reintroduction of the bacterium into their production plan.

During our field trip we were able to stop by remarkable tourism sites. The land escape of Costa Rica is amazing. We visited Poas volcano the biggest glassier in the world. We also drove all the way west to the pacific beach. And during our trip we always stopped by small shops to buy souvenir.

By participating in the program, I was able to facilitate the group's views by explaining how developing and limited resources county like Sudan approaches food safety, how milk and meat is process at production facilities. The Farm to Table program gave me the opportunity to appreciate the global integration of food systems. It makes me more familiar with the food

system in exporting countries such as Costa Rica. I was able to appreciate similarities and differences among the food systems in Cost Rica, United State and Sudan. By participating in the Farm to Table program I improved my network building and group activities.

References:

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