Sustainable Agriculture in Liberia.

A Report on Spring Break Travel by a University of Maryland Student Group
LIBERIA

61% YOUTH

4,503,000
TOTAL POPULATION

83.3%
LESS THAN $1.25 A DAY

70%
IMPORTS FOOD
INTRODUCTION

ROOTS is a University of Maryland student-led organization that strives to combat hunger and poverty in Africa by promoting innovative and sustainable agricultural practices and working in partnership with local communities, farmer organizations, and colleges. ROOTS is made up of undergraduate students from varying disciplines. This diversity makes ROOTS a vibrant organization dedicated to change.

The premier launch for ROOTS was in Liberia, West Africa. Despite having vast amounts of arable land, Liberia still imports over 70% of its food, as many people do not have access to the education or tools needed to grow, store, or transport food on large scales. Poverty in Liberia is high, and approximately 83.3 percent of the population live on less than $1.25 a day. Due to the civil war (1989-2003) which destroyed physical infrastructure as well as social infrastructure, Liberian youth make up 65% of the population. Currently, many youth do not believe that agriculture is a legitimate career path as they think it is a job for the poor and uneducated. Therefore, the agricultural sector continues to suffer and food security continues to be a huge challenge for the country. If the youth could come to know farming as an intricate science and an exciting business opportunity, things could really change in Liberia. Young people are the future of this country in a very immediate way, and that is why ROOTS is excited to be working alongside of them.
Over the course of the Fall 2017 semester, the students and faculty advisors from both the University of Maryland (UMD) and Liberia International Christian College (LICC) met weekly via video-conferencing (Google Hangouts and WebEx). Our meetings led to four major resolutions:

- To conduct a book drive to gather agricultural textbooks for LICC library, which previously had only 5 agricultural books in November of 2017;

- To arrange an agricultural expo for Liberian youth in order to encourage more young people to pursue agriculture and help in LICC’s extension efforts to local farmers;

- To provide needed equipment, including soil testing kits, tissue testing kits, pest management equipment and more, and agricultural training, including the topics of pest management, sustainable agricultural production techniques, and soil health;

- To provide entrepreneurship training to LICC students and local farmers that focuses on value added agriculture and marketing.

To make the program more impactful, we set a goal of traveling to Liberia for the implementation phase of the program, which would require at least $13,000 in traveling expenses. We initiated multiple fund-raising events including selling ROOTS t-shirts, distributing Panda Express vouchers, and creating a GoFundMe page. Two months of fund-raising and recruiting sponsors helped ROOTS pass its goal, and raise over $20,000.
Our goals were specific. We had a few challenges. Our outcomes are effectively mind-blowing.
WORKSHOPS

GOALS

The goals of visiting these villages were to collaborate with LICC students to: introduce the implications of soil health; demonstrate the use of pH, nitrogen, and phosphorous level testers that were donated by ROOTS and are all available for use at LICC; discuss plant disease, crop rotation, and how to make and when to use insecticides and pesticides; discuss various methods of record keeping and their importance, and finally, introduce the concept of the enterprise budget. We would start the day by visiting their crop fields to obtain soil and plants for demonstration. Through these demonstrations, we were able to visualize and facilitate discussion on the issues the farmers were having.

CHALLENGES

Our main challenge was making sure that our presentations were clear and concise enough to cater to our audience. Much of our audience did not have a very high level of education, and we needed to make sure we delivered the presentation in a way that was conducive to a positive learning environment. This challenge was also amplified by the language barrier. Although nearly everyone in the villages spoke English, there was a difficulty in understanding each other due to varying dialects. We also had difficulty with the timing of the presentations. The workshop for each of the villages had a very rigid timeline, and we had to stick to it so we would not run over or become monotonous. As a team, we were also faced with the challenge of making sure that our information and equipment would be put to good use and implemented properly. Question and answer discussion sessions on the subjects were crucial for material to be clarified and reinforced.

KEY OUTCOMES

Farmers in each village learned an ample amount of new information regarding soil health and testing, plant disease and crop rotation, how to make and apply insecticides, and how to keep records and upkeep an enterprise budget system. Often, it was not only the presenter, but also members of the UMD or LICC teams, who provided insightful responses to the multitude of questions raised during discussion. It was very important to us to be able to convey the information to our audience in a timely and effective manner. Knowing that ROOTS only had one week in Liberia, we emphasized the idea of a new and growing partnership between the village and LICC. We reiterated to the farmers that we have donated new equipment (that we tested in the presentations) to LICC, and that they can use LICC as a resource whenever they need help with their crop production. We believe that fostering this partnership is one of the most important outcomes of each of these workshops, because we can ensure that the information and equipment we have brought to the country is implemented effectively.

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WORKSHOPS

**GBEDIN CAMP**

Gbedin is an agricultural production village that is approximately 45 minutes from Ganta. It has been the target of NGO and government funding, mainly because of efforts to improve food security for the entire county of Nimba. This co-op of farmers (150 male, 100 female) focuses on rice, vegetables, and palm oil production with 165 cultivated hectares.

**FLUMPA**

Flumpa is a district headquarter established in 1850 that has a high school, community clinic, mission station, and a lot of available land. There are about 4600 people within the village, with approximately 1150 farmers involved in their robust vegetable production.

**KPEIN**

Kpein is a small village that is approximately 20 minutes southwest of Ganta. It has a population of about 3000 people, with many citizens involved in rice and vegetable production. A lot of women are involved in the agricultural co-ops, and they are interested in increasing their knowledge so that they can increase food security for their families and community.

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WOMEN’S GROUP SESSION

Leyla Merlo, a UMD student, presented on Maternal Health and Food Safety. There were nearly 40 participants in the audience. Because the topics of discussion were both sensitive and personal, men were prohibited from attending the workshop. This allowed for a safe space for women to openly converse on these important issues.

In her presentation, Leyla discussed existing health statistics in Liberia, ways of improving maternal health via better nutrition, and food safety practices. The participants’ intellectual engagement yielded a large volume of questions and comments throughout. Anna Glenn will continue to work with the group in creating more opportunities for training women on topics such as malaria, pregnancy, and nutrition in hopes that these women will become community health leaders.
Value Added Workshop
INTRODUCTION

Experts advocated for collective action like cooperatives to acquire better agricultural input such as feed and livestock medication while the Liberian government turns its focus towards farmers and agriculture.

After three successful workshops in villages across Nimba County, ROOTS and LICC students partnered to host an Agriculture Business Development workshop for Nimba County community members and LICC Students. 136 participants came together to engage with each other and experts to increase understanding of agricultural entrepreneurship and tackle challenges in agriculture. Community leaders and farmers from Gbedin Camp No. 3, Flumpa, and Kpein were in attendance, as well as farmers from other nearby villages in Nimba and LICC students. We sought to introduce the concept of value-added agriculture production, increase business acumen in the farming community, promote the LICC library as a resource to the agricultural community, and foster collaboration to discuss challenges and solutions in agriculture.

Workshop participants were randomly assigned to tables and as seminars were given on value-added agriculture, the business model canvas and the 4 P’s of marketing, each table was tasked with developing a business idea together. Groups developed business ideas for the production and sale of high nutrition cornbread, orange juice, scented soap, palm kernel oil soap, roasted sweet corn.
Mai Urey is an IT specialist who has managed IT divisions of multinationals corporations. She is also the previous owner and manager of Data Technology Solutions Inc., which was the first internet service provider in Liberia. Ms. Urey shifted from technology to Liberian agriculture as she became the current CEO of Wulki Farms and Farmers Paradise, a farm and resort. The farm was once a supplier of chicken, quail, fish, and eggs to supermarkets, but now mainly supplies vegetables in Monrovia. In recent years, she has become a leader in a major poultry producers’ group that advocates for improved market conditions for agricultural products produced in Liberia.

After Seminars on value added agriculture, the business model canvas and business model development, as well as business marketing, Mai Urey spoke to workshop participants about business ethics. She explained that business ethics helps to combat corruption that plagues Liberia and the effort starts with each individual. Ms. Urey shared with attendees that one’s conscious easily recognizes what is right and wrong. She highlighted that her success and the success of others can be long term as long as integrity exist in your actions. This integrity must exist in your interactions with employees, partners, neighbors, and competitors. She concluded with the ‘golden rule’ of loving your neighbor as yourself and at times, more than yourself.

**EXPERT DISCUSSION GROUPS**

After a speech from Mai Urey, each group of participants regrouped to discuss challenges and solutions with experts in the agriculture industry. Each group was assigned an LICC and UMD student to help record what topics arose in the organic discussions. Experts rotated from table to table to talk to groups and further their findings into feasible solutions and steps to take immediately. Access to the market and road conditions, disease and feed issues for livestock production, as well as current economic conditions. Experts advocated for collective action in the form of cooperatives to acquire better agricultural input such as feed and livestock medication while the Liberian government turns its focus more towards farmers and agriculture. Groups also came up guidelines for a successful agricultural business which included conducting a market survey, testing your product, respecting your customer and maintaining integrity and maintain records. Experts summarized the group discussions in front of all groups at the end of the day and highlighted the utilization of informational resources such as LICC and the internet are key to each farmers growth in the same way that the formation of cooperatives can be.

Experts: Umuru Sheriff (CEO of 4-H Liberia), Kent Bubbs (Director, Liberia Pure), Joe Gatie (Beekeeper at Liberia Pure), Mai Urey (CEO at Wulki Farms), Mandela Jones (AREC student at UMD), Joseph Anyinka (Entrepreneur), Lami Mason (Agribusiness owner in Gbanga), Dave Myers (UMD Extension Professor & ROOTS advisor)
Impacts
**Impacts on ROOTS Africa**

**Enhanced Global Awareness:** Through the Global Classroom initiative, UMD students were able to learn about the dynamics of Liberian culture, including aspects of farming, student life, and communication. UMD students also experienced this culture first-hand upon traveling to Liberia.

**Developed Leadership Skills:** Both UMD and LICC students were in charge of a specific project, whether administering discussion and presentations, establishing fundraising events, supporting the book drive, or recruiting via networking and social media activities.

**Advanced Career:** The skills and knowledge garnered in this unique program will give the students a competitive edge in the job market.

**Experienced Personal Growth:** Both LICC and UMD students developed deep and meaningful relationships, both within their respective cohorts and across cultures. The experience enhanced the students’ understanding of themselves; increased their maturity, interdependence, and self-confidence; and influenced their perspective on the world.

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**Impacts on Farmers**

**Increased Agricultural Knowledge:** Farmers learned about basic principles and practices regarding soil health. Additionally, farmers participated in discussions and demonstrations about new integrated pest management techniques and how those techniques are viable alternatives to other methods.

**Increased Understanding of Agribusiness Opportunities:** Farmers learned about record keeping, budgeting, planning for a business, marketing, and adding value to products.

**Increased Awareness of Locally Available Resources:** Farmers were made aware of resources that LICC offers such as soil testing, disease diagnosis, and farm management planning.

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**Impacts on LICC Students**

**Increased Global Agricultural Awareness:** By interacting closely with teachers and students from UMD, the LICC students learned several similarities and differences between Liberian and American agriculture.

**Expanded Personal Growth:** The LICC students were exposed to new ideas, perspectives, and values, which forced them to think critically about their own beliefs and practices.

**Improved Organizational Skills:** For many of the LICC students, this was their first time organizing such a large and complex event. In doing so, they gained skills in prioritizing, delegating, and organizing as they worked to prepare for this event.

**Enhanced Communication Skills:** Several LICC students prepared and presented training sessions to large audiences, which helped develop and strengthen their communication skills.
LiCC Student Testimonies

“The UMD student visitation led us to reawaken our relationship with three of our farming communities. As a result of these workshops conducted; it was discovered that the needs were overwhelming. This has created opportunities for us at LiCC to work with these farming communities to arrive at some applicable solutions to their soil problems, disease problems, and nutrient levels issues.”

Konah Drogbay
Senior Agriculture Student.
“The industrious work of ROOTS Africa has influenced and impacted knowledge unto farmers and businesses in Nimba County and Liberia at large. The business model presentation was very touching for me in particular (knowing your customers and customer service). I appreciate ROOTS Africa and the UMD students and staff for the books and equipment given to LICC. Their visit was second to none, it will always be in our hearts.”

Ezekiel D. Wu
Senior Agriculture Student.
Thank You
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Thank You.

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