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Poultry, Protein and Profit Across Continents: A Perspective on How Poultry is Changing Lives in Belize and Mozambique

Introduction

The University of Arkansas has successfully introduced several faculty-led global community development programs in the last decade that cater to various educational interests for both undergraduate and graduate students. Students are selected through a competitive application process and work closely with faculty leaders to develop a project plan that will be implemented during the program prior to departure. The students are accommodated together in-country with faculty members throughout the entire program and earn credit hours in an area relative to their field of study. These programs are intended to provide an immersive research experience in a low-income area under the guidance of experienced faculty members.

University faculty currently lead three such programs. The first program, founded in 2006, brings a large group of students to Dangriga, Belize each summer with multiple faculty members to focus on projects in health, social work, and business. The faculty-led community development program in Mozambique also takes place in the summer session in the village of Nampula, Mozambique. The program, founded in 2012, partners with a local poultry operation called New Horizons and student projects focus on a range of disciplines, including agriculture, engineering, health, and business. A third program, implemented in 2015 in Can Tho, Vietnam, takes place during the winter intersession each January. Peacework, a global nonprofit with ties to the University of Arkansas, assists students and faculty with project identification and selection. Many students interested in service-learning have chosen to participate in multiple community development programs throughout their undergraduate career.

The service-learning program in Belize has led to a longstanding partnership between the community of Dangriga and the University of Arkansas. Peacework has a wide network of community partners in the Stann Creek District, which simplifies the process of assessing the needs of the community and project preparation prior to student arrival. As service-learning programs have become more established at the University of Arkansas, both undergraduate and

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graduate students have increasingly used these opportunities to complete international research. Projects can be designed to provide ongoing research components for future groups of students. The concept of an international service-learning research opportunity for small groups of students looking to advance beyond the faculty-led programs has recently been explored. The University of Arkansas successfully sent a group to Dangriga in summer 2016 for 8 weeks to complete individual service-learning projects; all students had previously participated in at least one faculty-led service learning program. The students operated separately from the larger group of students travelling with the faculty-led program and also partner with representatives from Peacework to implement their projects. This small group of students was given more independence from faculty leaders and had the opportunity to engage in their projects on their own.

Service-Learning Experience

I had the opportunity to participate in the faculty-led community development program in Mozambique in 2016. My project focused on measuring the impact of employment at a large-scale poultry farm on overall quality of life of employees and their families. The farm, called New Horizons, seeks to increase poultry production and access to employment opportunities in the city of Nampula and supports sustainable economic growth. This work was used as my research for my undergraduate honors thesis. I surveyed employees working directly on the New Horizon farm as well as poultry outgrowers deep in the rural areas surrounding Nampula. This project exposed me to poultry production practices in low-income areas and the benefits of employment from a large-scale farm on a community. Increases in poultry and egg production in Nampula provide access to protein in the region where meat consumption was previously limited. I designed and edited my survey in the six months leading up to departure, but upon arrival discovered I needed to start over after learning my survey was not fully translatable and took an extremely long time to deliver. The challenges of implementing research in a low-income country, such as language barriers, transportation difficulties, and lack of access to supplies, taught me adaptability and patience as I worked with my team members and faculty leaders to adjust and improve my project in-country.

After completing this program, I was interested in continuing to work with another service-learning program. In summer 2017, I travelled to Dangriga with four other students from the University of Arkansas (UA) who all had previous experience with service-learning. I partnered with another UA student and worked with a local college professor named Derek Jones. Professor Jones had designed a backyard poultry farm at his home that he believed could be replicated by local households looking to increase both family income and protein intake. Jones,

who relocated to Belize from the United Kingdom over 25 years ago, had previously served as a community partner with Peacework and had experience working with the University of Arkansas faculty-led community development program.

The town of Dangriga has a population of approximately 9,600 people and is located in the Stann Creek District of Belize, with an estimated 72% of the district residing in rural areas (The Belizean Child Virtual Knowledge Centre, 2014). Despite the expanding tourism industry in Belize, Dangriga continues to experience high poverty rates. As of 2013, the unemployment rate in Stann Creek District was 15.0%, with a labor force participation rate of 63.6% (Statistical Institute of Belize, 2013). Belizeans residing in rural areas have fewer employment opportunities and lower employment outcomes. Males dominate the labor force with only 35.6% of total employed citizens of Stann Creek District being female (Statistical Institute of Belize, 2013). The town of Dangriga has not established a sewer system for wastewater treatment disposal and most houses are located in the dense area of the city surrounding the canals. Public health issues in Dangriga include widespread obesity and lack of access to quality medical providers.

The objective of our project was to create a manual that would describe how to begin a backyard poultry operation for Dangriga residents with little to no experience in poultry or agricultural production. The manual combines the technical aspects of farming with basic business keeping principles. We began by observing Jones' farm and his process for ordering, maintaining, and processing chickens from start to finish. The manual outlines four different models for a backyard poultry farm, which can be selected depending on variables such as initial financial resources, backyard size, and time availability of the household. The manual includes all necessary information needed to construct chicken houses, obtain feed and supplies in Dangriga, maintain healthy birds, and process and sell the final product. Marketing techniques and information regarding business record keeping and budgeting are also included. The result was a 50-page booklet containing detailed information and informative images that can be distributed to families interested in replicating Jones' operation.

Service-Learning Project Sustainability

While working in Dangriga, I connected with a local family who has the potential to test our manual and begin a poultry operation in their backyard using our guidelines. Jones' has customers in the area who would also be interested in learning how to run a poultry business. My background in Agricultural Business provided a new perspective for Jones to evaluate whether his business practices were efficient and effectively put his model into writing.

After eight weeks of working in Dangriga, I still anticipate much that can be done with this

project in the future and I believe this has opened multiple opportunities for students in the future to benefit the Dangriga community. My field of study provided me with the tools to understand both the agricultural and economic components of my project. However, students with backgrounds in engineering and animal science would also contribute important work to Dangriga. My vision for the future of my project would be groups of students utilizing this manual and testing the model on several households to better understand the needs of families looking to grow poultry. This model for a backyard poultry farm has the potential to benefit countless families in Dangriga and surrounding areas and I look forward to this research continuing in the future.

Jones and I also discussed other educational opportunities to accompany the manual, including a website or social media group dedicated to Dangriga poultry growers that includes videos and links to agricultural extension services. This would also allow poultry growers to network with one another and learn from each other. Poultry outgrowers at New Horizons in Mozambique learned how to manage their operations through a short course that covered basic information on poultry production and business practices. A future student from the University of Arkansas with a background in education or communications could design a similar basic course that would be offered in Dangriga to help farmers get started. Derek Jones is a valuable connection and I would recommend that students coming to Dangriga continue to work closely with to target and directly assess the needs of the community. \

Students who intend to complete a long-term research project in a developing community should gain initial service-learning experience through a faculty-led program first. These programs provide the foundation for a successful independent project by teaching students how to overcome the difficulties of performing research in a challenging environment and learn skills to help their projects succeed. The guidance I received from faculty members during my first service-learning opportunity allowed me to develop and implement a more advanced project with minimal assistance. I would recommend that students research and understand the area they will be working in and utilize connections with community partners who have a better understanding of what the community needs. The objectives of my project in Mozambique varied greatly from my project in Belize because of differences in culture, demographics, and specific problems citizens in those communities are facing. The students working in Dangriga with me this summer all benefited from the large network of people the University of Arkansas has built up over the years all over Belize.

My overall experience with service-learning in Mozambique and Belize has had an enormous impact on my education and career development as an undergraduate. These projects cannot

compare to anything I would have been able to do on campus at the University of Arkansas. My projects have supported my understanding of my coursework in Agricultural Business and contributed to my interests in agricultural policy and global development. One of the many benefits of service-learning projects is learning how to work in a challenging setting and adapt to problems that would not exist in most situations. I believe these skills will accompany me beyond my undergraduate career. My service-learning experience has taught me flexibility, persistence, and determination to manage and overcome unique challenges and obstacles abroad with limited resources. These programs go beyond a typical summer internship or study abroad experience by pushing students out of their comfort zones and preparing them for real world situations. The long-term independent study program in Belize implemented by the University of Arkansas provides an example of continuing service-learning for students who have already engaged in faculty-led programs. The expansion of service-learning programs for undergraduate students is an outstanding addition to traditional study abroad programs and will have a phenomenal impact on the educational and personal growth of future students.

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