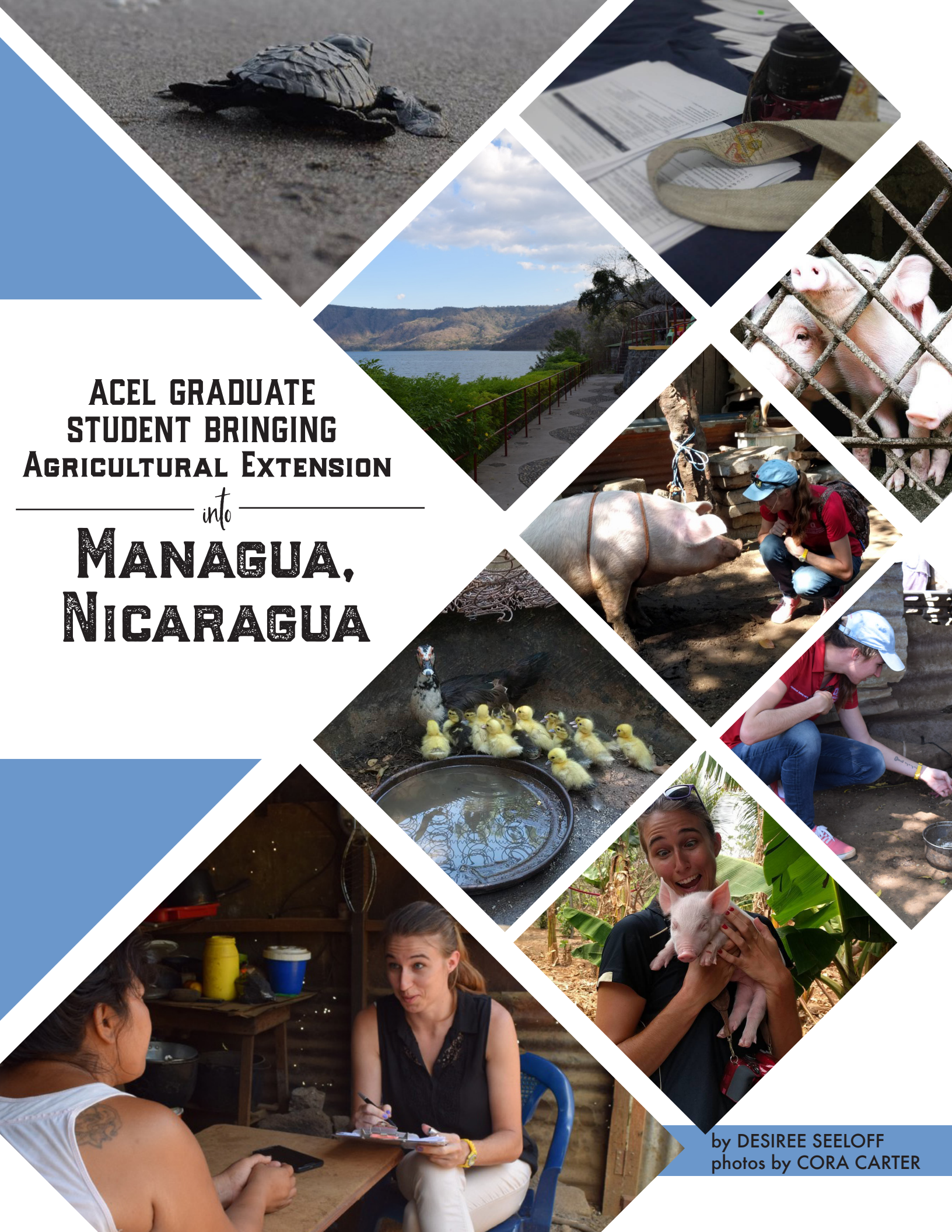


**ACEL GRADUATE  
STUDENT BRINGING  
AGRICULTURAL EXTENSION**

*into*

**MANAGUA,  
NICARAGUA**



by DESIREE SEELOFF  
photos by CORA CARTER






While most graduate students at The Ohio State University are sitting in lectures and conducting research, one student brining Agricultural Extension to the city of Managua, Nicaragua. Cora Carter, a graduate student in the Department of Agricultural Communication, Education, and Leadership (ACELE) was selected to receive an award from the U.S. Borlaug Fellows in Global Food Security Program. This program, which is funded by the U.S. Agency for International Development (USAID) has awarded Carter a \$20,000 grant to fund her project training urban farmers in Nicaragua. Carter's first trip abroad was to New Zealand and Australia as part of a People-to-People trip in the summer after her freshman year of high school. From there, she caught the travel bug and traveled to Haiti, Honduras, Poland, and Colombia on various agricultural related programs. Carter completed a dual undergraduate degree in animal science and international agronomy at Purdue University in West Lafayette, Indiana.

### WHAT IS A BORLAUG FELLOWSHIP?

Norman Borlaug, PhD, an agronomist and humanitarian who died in 2009, has been called the father of the "green revolution." Borlaug is credited with saving millions of lives worldwide by developing high-yielding, disease-resistant wheat varieties. For his work, he was awarded the Nobel Peace Prize in 1970. His legacy now continues by the exceptional graduate students that are accepted into the Borlaug Fellowship programs.



Since the Borlaug Fellowship requires a partnership with a mentor, Carter reached out to CGIAR, a global research partnership focused on food security. CGIAR has a Consortium of fifteen research institutes throughout the world each focusing on different areas of agriculture. Although Carter's research is most in line with the research being conducted by the International Livestock Research Institute (ILRI), the ILRI did not have any research centers in Latin America. Undeterred, she reached out to other CGIAR affiliates in Washington D.C. who then put her in contact with another CGIAR Consortium, the International Center for Tropical Agriculture (CIAT). CIAT is headquartered in Colombia, and has offices throughout Latin American, including one in Nicaragua. CIAT helped Carter find a mentor, Dr. Rein van der Hoek in Managua, Nicaragua that would be able to assist with her project.

### ABOUT THE PROJECT

The proposal for this project came about as a result of Carter's personal experiences with Agricultural Extension as well as her extensive international travel. Her work with Extension made her a believer in the power of agricultural instruction and her two trips to Honduras convinced her that she wanted to help farmers in Latin America. Carter saw an unmet need related to instruction regarding urban farmers in Latin America. Urban farmers face some unique challenges especially when livestock and humans share living spaces. These problems are compounded by a lack of educational programs and extreme

poverty. There is a great deal of research in this area conducted throughout Africa by the ILRI headquartered in Nairobi, Kenya. However, Carter felt strongly that she wanted to conduct this type of work in Latin America, an area of the world that Carter feels is overlooked in this area.

Carter's project will be divided into three sections. The first part of her work will be to gain a deeper understanding of the needs of the farmers. With the help of Dr. Van der Hoek, and her advisor, Dr. Dee Jepsen, Carter plans to identify several neighborhoods in Managua who would benefit from agricultural instruction and then interview several farmers in those neighborhoods to gain a deeper understanding of the specific needs facing these communities. There are unique challenges that come from inner city livestock: issues regarding health and safety are even more important when livestock animals and humans share the same spaces. These issues could range from waste management, zoonotic diseases, animal behavior, or other issues related to health and safety. Carter arrived in Managua, Nicaragua in February 2017. Her time will be spent surveying livestock owners within the city limits of Managua. These individuals may have one cow, or a handful of chickens, or a small flock of ducks, regardless of the number of animals owned Carter want to talk to them, to understand what precautions they are taking to raise livestock in close quarters with humans. Raising animals can be very lucrative for the poor, but also very unsafe if they are not experienced at taking care of animals. Carter's current plan to survey and interview as many these inner-city farmers as possible.

After the initial assessment is complete, Carter will come back to Ohio State to work with her advisor and other OSU experts in Agricultural Engineering, Animal Sciences, and Extension Education to create or modify curriculum that will address the specific issues facing these farmers. It is anticipated that this curriculum development phase will take about five months. For the final part of her project, Carter will spend 8 months in Managua training community leaders on the curriculum. These community leaders will then be able to train others in the community.

Carter's ultimate hope is to build is a "mini" extension program within the city of Managua. The country of Nicaragua does have some extension programming; however, it is concentrated in the more rural areas. It is known that people are raising livestock within the city limits, but little research is being done to help these farmers do their jobs more safely. These "city farmers" should not be discouraged from raising their livestock within the city, despite the risk of disease and injury. Raising livestock is the only way some of these individuals can eat and they should not be convicted to starvation. Instead, Carter hopes that this project will empower these livestock owners to affect change within their own communities allowing them to create communities of producers that work together towards a safer and more sustainable operation. —

To stay up to date on all of Carter's research, adventures, and words of wisdom, visit her blog at <https://coranicablog.wordpress.com>