Fighting Global Hunger: Identifying Effective Agroforestry Education Techniques for African Youth

Author: Dustin Homan
Project Advisor: Robert Birkenholz

Food production will have to increase by 70% globally, and double in developing countries, to feed the additional 2 billion people projected to inhabit the Earth by 2050. Dissemination of new agricultural technologies to farmers, specifically youth who must be part of the solution in 2050, should be pursued. The World Agroforestry Centre (ICRAF) has identified specific fertilizer trees that, when incorporated into farming systems, have been proven to nearly double crop yields in Sub-Saharan Africa. Unfortunately, ICRAF lacks strategies for circulating this knowledge throughout Africa.

The purpose of this study was to identify effective teaching strategies for disseminating knowledge about agroforestry to Kenyan youth for ICRAF to use in future curriculum development. Ten schools in rural Kenya were selected and visited to deliver hour-long presentations. Each presentation consisted of an introduction to discover previous knowledge, activities to teach agroforestry concepts and an evaluation to assess change in knowledge. Eleven unique techniques were utilized to teach agroforestry concepts; each technique's effectiveness was observed and rated by three presenters based on factors such as the students' abilities to recall knowledge and the students' interest/excitement in performing the activity. Interviews were also conducted with teachers, students and community members to assess contextual factors.

Based on observations and ratings, lessons that incorporated stories and experiential learning activities appeared to be the most effective in disseminating agroforestry information to students. Based on the results of this study, ICRAF can now craft relevant lessons to increase agroforestry awareness and practices among youth. The results of this study also stimulated the creation of an annual program for Ohio State students to continue educational research in this area.