

## MOSAIC

Models of One Health Solutions in Action in Communities (MOSAIC), formerly known as One Health Nicaragua (OHN), is a multidisciplinary, student-led project from the University of California, Davis aimed at developing sustainable solutions to address complex health problems and alleviate poverty in vulnerable, rural communities. In the early phases of MOSAIC, we identified and characterized health problems in Sabana Grande, a rural subsistence-agrarian community in northern Nicaragua, by administering a comprehensive health needs assessment survey. With the help of our survey results and human health partners working in nutrition, we identified protein as a scarce and expensive resource and poultry as one of the most affordable and relied upon proteins. In June 2014, additional survey data revealed that poultry production was limited as chickens suffered high mortality and lacked proper housing. We strove to ameliorate this problem because poultry provides high quality protein to impoverished families with little investment relative to other livestock species. We addressed these issues the following summer (June 2015) by providing workshops on poultry health and management, promoting routine vaccination against Newcastle disease (a highly lethal avian virus) by teaching local veterinary promoters proper vaccination protocols, and building chicken coops. In June 2016, we expanded our community outreach to include children in an attempt to foster future leadership potential and make them a valuable resource for instituting sustainable community change. After working in Sabana Grande for the past five years and seeing the positive impact we have made on community knowledge and food animal production, we have started to develop a pilot program in rural California to create an educational curriculum that can be applied to impoverished communities globally. In the summer of 2018, we collaborated with 4-H groups and our advisor, Dr. Rodrigo Gallardo, to expand our outreach to local communities in need with international implications in mind. We held two workshops geared towards biosecurity protocols and disease transmission for 4-H youth and youth leaders. Now, we are planning to work with backyard poultry owners to identify their needs, offer educational workshops, and provide preventative medicine (such as teaching good biosecurity practices and assessing flock health).

### Current Members:

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