

The Effects of Small Ruminant Health on Human Health in Two African Villages

Author: Katie Landrach

Project Advisor: Rose Elder

Background, Purpose, and hypothesis

Small ruminants are of great importance in West Africa as they provide a means to assist in agricultural sustenance. Thus, parasites causing constraint on ruminant productivity prove harmful to farming communities. Poor outcomes could be enhanced by the parasites' ability to resist treatments. In June of 2011, OSU-ATI treated 400 goats and sheep for worms and mange in Ho, Ghana. To determine how these controlled treatments affected the health of small ruminants and humans, a research proposal ensued. We hypothesize that villagers in the test villages will have fewer cases of intestinal parasites than control villages.

Methods, Materials, additional work

Under the supervision of Ghanaian medical personnel, adult villagers will be treated for internal parasites in two villages with a pill form of Albendazole. Animals in the test village will be treated for intestinal parasites and mange using an oral drench of Ivermectin. These will be administered at three-month intervals for a year. The ruminants will also be treated with a one-time dosage for PPR (pestes des petits ruminants). Next, 50 young kids (baby goats) in the test village and 25 kids in the control village will be weighed. Following the first year, stool samples from 50 individuals in the test village and 25 in the control village will be tested, the kids will be weighed again, and the health of the animals will be assessed through observation. After assessing our results, we expect to find that the health of villagers, the weight of the kids, and the health of animals in the test village will likely increase compared to the health of villagers and animals in the control village. If this is true, then villagers will see the importance of maintaining health treatments for their animals.