SIL Establishes First SMART Farm in Ghana

Sub-Saharan Africa’s first Soybean Management with Appropriate Research and Technology (SMART) Farm was established in 2014 at the Savanna Agricultural Research Institute in Ghana (SARI). The SMART Farm is an innovative approach, providing the foundational agronomic research necessary for successful soybean production in the region. The SMART Farm fills a significant gap in knowledge among researchers, extensionists, the private sector, contractors, NGOs, and farmers as to: proper soybean production techniques; soil correction and preparation; weed, fungi, and insect management; environmental stewardship, and varietal performance and selection criteria. The reason the significant knowledge exists is because tropical soybean is new to almost all of Sub-Saharan Africa. The SMART farm replaces anecdotal guidance with regular, formal, and scientifically produced guidance for the industry, while simultaneously engaging in deep capacity and institution building with its partner the Savannah Agricultural Research Institute.

Research and collaboration occurs at all three SARI location, the main headquarters at Tamale, and the field stations of Wa and Bawku. The SMART Farm evaluates issues related to germination, planting date, amendments including phosphorous and inoculum, planting methods and varietal performance. The farm also serves as a hub for research related to seed quality, soil improvement, and nodulation. The SMART farm approach also involves capacity and institution building as the SIL team works hand-in-hand with Ghanaian researchers and technicians. The SMART Farm research model is innovative because of its ability to readily translate research into appropriate practices for adoption by those engaged in soybean production and development. The SMART Farm involves an integrated research platform spanning from germplasm development to agronomic practices, seed management, and environmental stewardship research all in one location. In sum, the SMART Farm serves as the research foundation for the successful scaling of soybean in Africa.

Dr. Brian Diers, University of Illinois, Co-Principal Investigator of Plant Breeding & Germplasm of Soybean Innovation Lab and Dr. Nicholas Denwar, Research Scientist (Genetics & Plant Breeding), Legumes Improvement Programme, Savanna Agricultural Research Institute pose by the Soybean Innovation lab sign at the research station in tamale, Ghana.
Dr. Nicholas Denwar, Research Scientist (Genetics & Plant Breeding), Legumes Improvement Programme, Savanna Agricultural Research Institute and technicians pose by new machinery purchased by the Soybean Innovation Lab to support the research station’s plant breeding efforts.

Dr. Nicholas Denwar, Research Scientist (Genetics & Plant Breeding), Legumes Improvement Programme, Savanna Agricultural Research Institute (SARI) and Dr. George Awuni of Mississippi State University and SIL SMART Farm Manager discuss in a research field at SARI in Tamale, Ghana.