

# Oggún Tractor teams with the USAID Soybean Innovation Lab

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**H**ere in the U.S., agricultural technology means one farmer can easily work hundreds of acres solo.

Most Americans, though, have lost touch with our agrarian roots, and almost none of us are faced with the choice of growing our own food or not having anything to eat.

But in many parts of the world, that is exactly the choice that millions of people face. Mechanized agriculture in sub-Saharan Africa (SSA) is more the exception than the rule. In many countries, the vast majority of agriculture is being practiced by smallholders who are farming only a few acres. Few farmers own tractors.

Most tractor work is done as a for-hire operation and often the only implement in use is a plow.

## Stick, hoe, and hand work

Maintenance and repair is also a problem. Most tractors in SSA are imported imported by individuals or non-dealer enterprises with no ongoing service, access to parts, or mechanical knowledge. Consequently, equipment graveyards are everywhere.

**Most planting is done with a stick, weed control is still done with a hand hoe, and harvest is done by hand, as is threshing.**

However, in a developing country like Ghana, the potential exists to find people with enough training from trade schools to develop an industrial workforce for the production of agricultural machinery. For Africa to meet its basic food needs, production—including mechanization—must be improved so that yields can sustain the population.



Learning how to build threshers at a SIL training class in Ghana

## Feed the Future with soybean protein

My organization, the Feed the Future Innovation Lab for Soybean Value Chain Research (Soybean Innovation Lab, or SIL) is the comprehensive program dedicated to soybean research for development.

The Soybean Innovation Lab is building a foundation for soybean production in Africa by developing the knowledge, innovation, and technologies for successful soybean production. Soybeans can be both an important crop for raising farm income and a high-protein crop to address food insecurity and poor nutrition. Soybeans' protein level closely approximates that of meat, which is scarce in many African diets. It is greater than any other cereal, legume, tuber, or oilseed grown now.

Charged with reducing global poverty and hunger through improvements in agricultural productivity among smallholder farmers, SIL has been working in Ghana to train local blacksmiths to build small threshers. By using local fabricators, we can help expand ag industrialization, lower costs to farmers, and increase acres under production, which will lead to higher farm income and better food security.

## Sweeping change with Cleber LLC

When Cleber LLC and its Oggún tractor were introduced to the Soybean Innovation Lab, the potential to collaborate to bring about sweeping change in the status of mechanization in Africa seemed obvious.

The Oggún tractor is a simple design that can be assembled in Africa by the local blacksmiths. Because the Oggún tractor is based on a modular power platform, it can also be a base for other tools and equipment, such as a small truck or a combine. Having small, affordable combines in Africa could be a game-changer for improving soil fertility.

## Needed: donor agency and contest

Cleber and SIL have two goals to get Oggún tractors into SSA. First, we are looking for a donor agency to help move some tractors into Ghana, where SIL will field test and demonstrate them for farmers to build familiarity. SIL and Cleber will locate potential dealers to produce, sell, and service the tractors, as well as train local mechanics and blacksmiths in maintenance and repair.

Our second goal is to develop a contest for the design of a small combine harvester integrated with the Oggún power platform. Again, we will need a donor to support the contest, which will have a cash award for the best design, financing for fabrication of a prototype, and the chance for the winner to travel to Africa to help field test and demonstrate the machine.

Other organizations with similar goals of improving agricultural mechanization are invited to join, as well.

The Oggún is a simple and potentially beautiful machine. Cleber's vision of a system that allows the equipment to adapt to the market will lead to a longer life for each unit, and greater return in investment, especially for people who already have little to invest. 