Introduction

Cassava is key to food security and poverty alleviation in Nigeria. The root crop is grown by over 4.5 million farmers on about 3.8 million hectares. In recent times, the importance of cassava to national food security has increased owing to its growing industrial use and its mitigating effects on climate change in sub-Saharan Africa due to its relative tolerance of droughts and even of short-term flooding. Although Nigeria is still the global leader in overall production of cassava with over 50 million tons, average yields in Nigeria are only about half of those in leading countries in Asia, and less than half of those typical from researcher-run trials in the country.

Weeds as a major constraint

Several factors are responsible for low productivity of cassava but poor weed management is generally among the principal factors. When compared to other crops, weed control in cassava in the humid tropics—home to cassava—is much more demanding. The root crop is usually in the field for a long time (10 to 18 months), and most farmers plant cassava at wide spacing thus providing an opportunity for weeds to infest the field and reduce productivity.

Impact on farm families

The presence of weeds limits the productivity of cassava, and negatively impacts farming families. Weeding takes 50 to 80% of the total labor budget of cassava growers. Up to 200-500 hours of labor for mostly women and children per ha are required to prevent economic cassava root losses in Nigeria. Women contribute more than 90% of the hand-weeding labor while 69% of farm children between the ages of 5-14 are forced to leave school and engaged in weeding. This burden compromises their education. Unless weed control is improved, Nigerian farmers will not produce optimal cassava yields, since farm families cannot plant more area than they can weed. Even if land were available, without innovations in weed control, they are doomed to stay as “very small-scale farmers” and will be unable to improve their livelihoods through farming.

Our intervention

Under the Sustainable Weed Management Technologies for Cassava Systems in Nigeria (Cassava Weed Management project), we aim to increase the productivity of cassava while minimizing the drudgery of hand weeding by women and children. In this context, IITA and its partners will work to develop state-of-the art weed management practices, by combining improved cassava varieties with proper planting dates, plant populations and plant nutrition options.
The project is also focusing on intercropping and tillage research. Integrated weed management practices, including the use of herbicides that meet globally accepted conventions and safety thresholds appropriate for smallholders, will be tested to make weed control in cassava more efficient and effective.

Our approach
Over the next five-year period, we will provide knowledge to about 125,000 Nigerian cassava farm families on better crop and weed management. Our goal is to generate relevant information and share it with farmers to allow them to make their own decisions about which weed management options are best for their families. The project envisions in year 5 working with the Ministry of Agriculture and its partners to develop an investment project to scale-up across all of Nigeria using modalities and lessons learned from the project. The private sector are contributing to the goals of the project, providing products for testing, manuals for training, and advice and assistance, especially on communicating environmental safety, applicator safety and food safety factors.

Our beneficiaries
The ultimate beneficiaries are the Nigerian farm families involved in cassava cultivation. Also, policy makers will have better information on modern, relevant and appropriate cassava weed management technologies that could be used to create and implement a strategic plan for better cassava weed management to extend the benefits to another 3-5 million farm families in Nigeria. This project will also help to meet the government’s goals for sustainable intensification of agriculture while avoiding food insecurity, in the face of population growth, urbanization, climate change and climate variability.

Summary on Sustainable Weed Management Technologies for Cassava Systems in Nigeria project
The Sustainable Weed Management Technologies for Cassava Systems in Nigeria otherwise known as Cassava Weed Management Project is a 5-year project that is assessing sustainable weed management technologies for cassava-based farming systems in Nigeria. The project is seeking to find solutions to the labor-intensive weeding usually performed by women and children and to increase cassava productivity for 125,000 Nigerian farm families.

The project is managed by IITA with donor support from the Bill & Melinda Gates Foundation. Implementation partners include the National Root Crops Research Institute (NRCRI), Umudike; the University of Agriculture, Makurdi; and the Federal University of Agriculture, Abeokuta. Other partners are the state Agricultural Development Programs (ADPs), government representatives, international cassava scientists, and the private sector.