In most areas of Sub-Saharan Africa cassava planting materials are produced through clonal multiplication, which involves cutting stems and planting these directly in the field.

This process is however limiting the speed at which new improved varieties can be released to a large number of farmers because it takes multiple years before sufficient volumes of planting materials can be produced.

Obtaining good quality cassava planting material through traditional clonal multiplication is hard because the technique is prone to contamination with pests and diseases.

However, a Semi autotrophic hydroponics (SAH) laboratory in Rwanda is addressing these constraints on cassava multiplication, making it possible for farmers to have rapid access to new varieties.

Introduced by International Institute of Tropical Agriculture, Ibadan (IITA) in Rwanda, the SAH lab at the Rwanda Agriculture and Animal Resources Development Board (RAB) – Rubona station is helping to increase the multiplicative rates while overcoming low survival rates during plantlet acclimatization of cassava seeds.

The SAH lab is an adequate solution to the cassava see system in Rwanda. RAB says that before, they faced losses in the process of moving plantlets from tissue culture to the field.

Dr. Silver Tumwegamire, a cassava breeder at International Institute of Tropical Agriculture (IITA), says that IITA responded to the request by RAB to introduce and adapt the same technology in Rwanda for purposes of increasing cassava multiplicative rates for tribasic seed management.

“This is successfully being done, the ultimate benefit is to increase the amount produced at tribasic seed level and this will eventually trickle down as more amounts of clean cassava seeds is delivered to farmers,” He explains

It is more than a year since the SAH lab was established and it has already shown improved benefits.

Dr. Athanase Nduwumuremyi, a Coordinator of Roots and Tubers Program/ Senior Scientist and Cassava breeder RAB underlines that the SAH is a solution to increase multiplication ratio of cassava and also it is helping conserve and propagate true-

to-type and pathogen-free cassava plantlets.

He further explains that another advantage of using the technology is that it used not to be a successful rate of even 10 percent but currently we're successfully hardening plantlets from tissue culture to the field with a success rate of almost 100 percent.

Rwanda produces over three million tonnes of cassava as average production, while the technology could increase production to around eight million tonnes per year.

Sabrine Mugwaneza, a trained SAH lab technician at RAB says that she learned about the technology in 2019 in Nigeria.

"After training, I started to work here at RAB SAH lab multiplying plantlets. Since then we multiply more, and different varieties both locally and imported than before," She pointes out adding that SAH is cheap, it does not require much protocols like the tissue culture lab

"Plantlets are ready after two weeks but the tissue culture lab takes over a month. The other benefits is that it is quicker, we don't need winning and screen house instead we go straight to the field," She further added

Of the three staple food crops in Rwanda (cassava, maize and potatoes), cassava makes up nearly one-quarter of production. The crop is mostly affected by Cassava Mosaic disease (CMD).

Jules Nkulikiyinka, a research technician at RAB recommends that to facilitate the lab, there is need to access the subsets, because it is difficult to take them from Nigeria or Germany.

He noted that they're trying to adapt to the other local subset but it doesn't improvise very well like the other taken from IITA.