



## Cassava Diagnostics Project impacts: Overview



*CDP has increased the capacity of laboratories across Africa so that researchers can now test and analyse their samples locally.*

### What is CDP?

Funded by the Bill & Melinda Gates Foundation and the UK Department for International Development, the Cassava Diagnostics Project (CDP) has been working with institutes across East Africa since 2009 to diagnose, track and sustainably manage cassava viruses. Cassava is a staple crop for 500 million people in Africa and is currently threatened by two devastating viral diseases: Cassava Mosaic Disease (CMD) and Cassava Brown Streak Disease (CBSD). CDP has therefore been working to combat these diseases and so prevent widespread famine – by ensuring that cassava remains a reliable food source across Africa.

Phase 2 of CDP will close in 2018, and researchers are therefore taking the opportunity to reflect and learn lessons from almost a decade of work.

### Overview of CDP's work

As part of his role as regional coordinator, Dr Joseph Ndunguru has overseen the Cassava Diagnostics Project's (CDP's) activities in all seven project countries across East Africa. As CDP reaches its closing stages, Dr Ndunguru reflects on the impacts of CDP's work.

#### Building the capacity of local institutions

When CDP's second phase began in 2015, the project's leaders knew that many of its scientists would need to carry out laboratory-based tests (such as DNA and RNA analysis) as part of their research into the spread of cassava viruses. CDP wanted to ensure that these tests could be conducted in the scientists' local laboratories, instead of the samples needing to be sent abroad – a process which can be costly and time-consuming.

To achieve this aim, CDP's leaders assessed the capacity of its partner institutions during the first year of Phase 2. As Dr Ndunguru explains "the capacity was very different [from country to country] ... [and] in some countries it was not there". This assessment helped CDP to allocate its resources effectively when purchasing DNA sequencing equipment, building new labs and screen houses, and training staff – allowing each country to conduct all their tests and analyse samples locally.





## Raising awareness of cassava viruses

As well as tracking and characterising cassava viruses in East Africa, CDP also worked to stop the spread of infected cassava plants. Farmers across East Africa commonly use infected cassava plants to produce planting material for their next harvest, allowing viruses to spread from year to year. CDP therefore produced and distributed clean planting material to local farmers to combat the spread of disease. Doing this successfully required the project to overcome a range of issues. For example, farmers were often wary of using new planting material and were unwilling to discard the infected planting material they were used to.

To overcome these prejudices CDP had to educate farmers about the importance of using clean planting material. This was done by designing and implementing a communications strategy across the project countries – which included TV and radio programs promoting the benefits of clean planting material.

The number of farmers they could reach in this way was limited, however. To increase the reach of these important messages, therefore, CDP hosted forums with key cassava scientists and stakeholders to explain the importance of encouraging farmers to use clean planting material. This succeeded in engaging several non-governmental organisations (NGOs) with CDP's message, creating new partners who helped to distribute clean planting material to over 1000 farmers across the region.

**“When I joined my institute there were only four scientists doing biotech research. Now we have over 35 scientists”**



## Increasing the visibility of host institutions

CDP's work to diagnose and combat cassava viruses has also helped to build the capacity of the agricultural institutes hosting CDP researchers. New CDP-funded virology laboratories and screen houses make it easier for institutes such as the Mikocheni Agricultural Research Institute in Tanzania to secure funding for new projects. Donors such as USAID and the National Science Foundation can now fund projects confident in the knowledge that the scientists will have all the equipment needed for advanced testing and analysis.

## Creating a legacy for the future

New virology laboratories and equipment have also helped to attract new scientists and students to cassava virus research. Dr Ndunguru himself notes that “when I joined my institute ... there were only four scientists doing biotech research. Now we have over 35 scientists”.

Projects such as the West Africa Virus Epidemiology Project (WAVE) have also used CDP as a model to develop their research across several countries. CDP has, for example, shared protocols on disease surveillance and laboratory work with WAVE, as part of its legacy.

### Contact us

Email: [m.millan@agshare.today](mailto:m.millan@agshare.today)

Tel: +44 (0)20 8672 5975

