Cassava Diagnostics Project impacts: Mozambique

CDP has helped the team at IIAM make connections with researchers across East Africa.

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.

CDP's work in Mozambique

The Mozambique branch of the Cassava Diagnostics Project (CDP) is based at the Agricultural Research Institute of Mozambique (IIAM) where they have been working to tackle cassava viruses and collaborate with researchers across CDP countries. During one of the final meetings before the project closes, CDP Mozambique's Country Team Leader Nurbibi Cossa reflects on the impacts of the project and its legacy in the region.

Improved laboratory facilities

One of the major impacts of CDP in Mozambique has been its work to improve the laboratory facilities at IIAM. Before CDP's work many of the virology labs lacked even the basic equipment necessary to conduct analysis of samples. Nurbibi remembers that "before [the project began] we didn't have the human capacity or infrastructure … we used to send the samples abroad for DNA and RNA extraction." This process was time-consuming and expensive for researchers who had to limit the number of samples they tested due to the high costs involved in sending them overseas.

When CDP began its work in Mozambique it set up a new virology laboratory at IIAM – providing the lab with new diagnostic equipment (including PCR sequencers), to allow researchers to diagnose cassava viruses at a molecular level for the first time. The project also provided training for staff at the institute to ensure that CDP scientists could maximise the potential of this new equipment

for their research. This new sequencing capacity means that researchers in Mozambique are now able to conduct RNA and DNA extraction of their samples locally at IIAM and no longer have to send them abroad.

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Ending the cycle of infection

The CDP team in Mozambique also worked to communicate to farmers in the region the importance of using clean planting material. Before CDP's intervention, local farmers would produce their planting material from cassava already infected with viruses, carrying the infection onto their next harvest and continuing the spread of the virus.

To combat this, CDP worked directly with over 300 farmers in Mozambique, training them to recognise cassava viruses and reduce the incidence of infection by using clean planting material. CDP engaged groups of these farmers in demonstration plots, planting clean and infected cassava side by side and allowing the farmers to observe first-hand the greater yields produced by clean planting material. These demonstration plots helped to increase demand for clean planting material and reduced the incidence of cassava viruses in Mozambique.

CDP Mozambique reached out to farmers during their surveys to raise awareness of cassava viruses

Building a network of researchers

One of the most important impacts of CDP's work for the team at IIAM was the network that it helped to create for cassava researchers across East Africa. Scientists from all seven CDP countries were able to collaborate with other members of the project working on the same cassava viruses and facing the same day-to-day issues.

If a researcher in Mozambique was facing a particularly challenging issue with their work, they had access to a network of scientists who were already tackling and solving similar issues. If phone and Skype conversations weren't enough to resolve a particularly tough problem, then CDP institutes could send researchers to stay in Mozambique and work directly with the team at IIAM.

In Nurbibi's case, these connections will continue to help her with her work for years to come – as she'll be able to stay in contact with these scientists even as they move on to other projects. This network of cassava virus experts across East Africa will help to ensure that the impact of CDP's work continues long after the project closes – supported by the AgShare Platform and its communication links and data stores.

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