

### **Cassava Diagnostics Project Impacts: Kenya**



CDP Kenya increased the region's capacity by investing in greenhouses and diagnostics equipment.

#### 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 Kenya

The Cassava Diagnostics Project (CDP) has been working in Kenya since 2013 based at Jomo Kenyata University of Agriculture and Technology (JKUAT). At a meeting for the project's closing, CDP Kenya's Country Team Leader Professor Elijah Ateka reflects on the impacts of the project and its legacy in the region.

#### Engaging with local farmers

Throughout the course of the project, CDP Kenya conducted field surveys, assessing local cassava farms for signs of disease and its spread. While surveying the fields, the team took the opportunity to make connections with farmers and have discussions about symptom identification and disease management.

Following these discussions, Professor Ateka noticed increased enthusiasm from the



farmers for more information. The farmers were keen to come to the team for advice, Professor Ateka says, "now each time we go they'll ask me 'how do I manage this? Where do I get the clean planting material?"".

The farms using clean materials witnessed a significant increase in yield. In one case a 300% yield increase was seen between the clean planting material compared to using diseased materials. This clear difference showed the farmers that the use of clean materials was not only good practice for



disease prevention but was also a wise investment.

# "In one case a 300% yield increase was seen when using clean planting material"

The Kenya team carried out field surveys in 2013, 2016 and 2017. During the surveys, Professor Ateka estimates that the team have been in contact with over 1,300 farmers. He predicts that if a majority of these farmers begin to use clean planting materials with the associated yield increases there will be an overwhelming positive impact in the region.

# Amplifying the message at agricultural shows

Agricultural shows were another good way to reach out to people in the community and educate them about symptom recognition and disease prevention in cassava. Every person passing the CDP stand at a show had the chance to engage in discussion about the team's research and how it applied to them.

At these shows the CDP team engaged with a wide variety of people from farmers to dignitaries. Professor Ateka remembers that "ministers and other policy makers visited the stand, and importantly people involved in extension, but the most important dignitary who passed by was the President".



CDP engaged with members of the community through agricultural shows across Kenya.

## Capacity building at JKUAT

The influence of CDP on the region's capacity to recognise and manage CMD and CBSD is vast. Money invested in the project has been put into infrastructure, including greenhouses and diagnostics equipment. This will facilitate future crop research in Kenya and in all seven countries in which CDP operates.

The Kenyan branch of CDP is unique within the project in that it is based at a university. This gives JKUAT students access to the project's modern facilities as early as their undergraduate degree and allows them to be trained in complex diagnostics.

The facility was completed in 2016 so, by 2018 at the time of writing, the first sets of students using the equipment have graduated and moved on to their careers. Two such students have stayed on at the university to work with Professor Ateka and earn Masters degrees, two more are now working at research institutions in Kenya as virologists and one has begun work on a virology project for the United States Centre for Disease Control. The project's legacy of training successful young scientists will be felt throughout their careers.

The network created between the CDP teams will live on after the project ends, but Professor Ateka emphasises the importance of continued investment in the region: "we have the infrastructure now and the investment is needed to keep it being used and continue the positive impact in all seven countries".

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