CASSAVA VIRUSES DIAGNOSTIC AND CONTROL IN THE SOUTH KIVU REGION

KWIBUKA, Y.1; BASENGERE, E.2; MASSART, S.3; VANDERSCHUREN, H.; BRAGARD, C.4

1. Catholic University of Bukavu, Agriculture Faculty, B.P. 02 Cyangugu Rwanda
2. Liège University, Laboratory of Phytopathology, Gembloux Agro-BioTech, Passage des déportés, 2 – 5030 Gembloux
3. Liège University, Laboratory of Genetics, Gembloux Agro-BioTech, Passage des déportés, 2 – 5030 Gembloux
4. Catholic University of Louvain, Earth and life Institute, Croix du Sud

CONTEXT

Worldwide trade + Climate change = 50 % of emergent pathogens are viruses

• The prevalence of cassava viruses (CMD&CBSV) and its vectors is becoming considerable
• Data from farmers conditions has shown that both local and improved varieties are susceptible

Fig. from left to right: Cassava mite, Whiteflies (Biemia spp.), MealyBugs on cassava plant, Cassava bronstreak Disease symptoms on cassava tuber roots.

• Seed systems of root and tubers is known to be difficult to organize. Farmers rely to their own local varieties to ensure continuity of production.
• Low acces of farmers to good quality of planting material is the main driver of the increasing disease prevalence

OBJECTIVES & METHODS

● Less knowledge exist about the viral population of viruses infecting cassava in South Kiu and relatively less is known about characteristics of both CBSD&CMD epidemiologies.
● Recent studies of the CMD epidemiology in the South Kivu Province has given some signals of the possibility for this region to stand for a possible center of diversity of plant viruses.

RESULTS

✓ Preliminary results has identified a negative correlation between epidemic parameters from Cassava Mosaic Disease and those from Cassava Brown Streak Disease.
✓ The role of some parameters related to the cropping system and the whitefly vector has proven to potentially influence epidemic parameters of both diseases.
✓ Results indentified a decrease of approximately 2t/ha of cassava production from the period before the occurrence of CBSV and actually.
✓ Probably new recombinants of CBSV species was identified. But results still under analysis
✓ Activities related to the improvement of seed system and access to good quality of planting material

REFERENCES

(2) Biasimwa, (2012). U.C.L
(3) Massar et al (2014) Virus Research

Contact: bisimwavyves@gmail.com