

3rd International Conference on **FOOD AND NUTRITION**

February 09-10, 2022 | Webinar

Identification of SSR markers linked to Aphids Resistance Genes in Cowpea Genotypes**Adelaide P Ouédraogo¹, Agyemang Danquah², Jean-Baptiste Tignegre³, Jonathan N Ayertey⁴, Kwadwo Ofori⁵**^{1,3}INERA University of Ouagadougou, Burkina Faso^{2,4,5}WACCI, Ghana

Quality seed production is a specialized activity that paves way for initial assurance towards realization of higher output. It is estimated that the direct contribution of quality seed alone to the total production is about 15–20 percent depending upon the crop and it can be further raised up to 40 percent with effective management of other inputs. However, plant breeding leading to quality seed production is time consuming. Yet, sustained increase in agricultural production and productivity depends on adequate supply of quality seed to farmers at the right time. Markers assisted selection is a solution to reduce the too long-time spending through conventional breeding because it allows breeding faster. The goal of this study was to facilitate the better use of cowpea genotypes resistant to aphids. Specifically, we sought to identify single sequence repeat (SSR) markers linked to aphid resistance genes. Two pairs of parents (Tiligre × K VX295-124-2-99 and Tiligre × IT97K556-6) were used to generate two F2 populations. These populations were screened with aphids. SSR markers were used to screen parents, F1, and F2 individuals to locate polymorphic markers and markers linked to the genes involved in resistance to aphids. The results showed that Markers MA61 and MA70 are linked genes involved in aphid resistance in cowpeas. The two genes of interest are located on chromosomes 3 and 7. These markers can be used in marker assisted selection process and used to test others breeding populations for a better understanding of the mode of inheritance of cowpea resistance to aphids. Given the fact that these markers are codominant, they can also be used to detect F1 false positives in crosses involving Tiligre, IT97K556-6 and Kvx295-2-124-99.

Biography

Ouedraogo P. Adelaide is a PhD in plant breeding from the West Africa Center for Crop Improvement (WACCI) in Ghana (Accra). She got earlier a master degree in plant breeding from the University of Ouagadougou (Joseph Ki Zerbo). She is a cowpea breeder at the national research institute (INERA/Burkina). She is an early carrier in the area of plant breeding and up to now she has been working on cowpea improvement and published 5 papers (3 as corresponding author and 2 as co-author). She is thankful toward institutions that helped her reach her academic objectives. In fact, she got Four-year scholarship from her government from 2004 to 2007, Two-year MSc scholarship from AGRA from 2013 to 2014 and Four-year PhD scholarship from DAAD and ECONET from 2016 to 2019. She is very interested about helping farmers build a better resilience.