Selection and validation of marker set for selection of resistant varieties of cowpea to Cowpea Aphid-borne Mosaic Virus (CABMV) in Burkina Faso

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Original submitted in on 10th May 2018. Published online at www.m.elewa.org on 31st August 2018

https://dx.doi.org/10.4314/jab.v128i1.8

ABSTRACT

Objective: This study aims to validate a marker set for selection of resistant varieties of Cowpea Aphid-borne Mosaic Virus.

Methodology and results: A molecular characterization of five genotypes using seventeen (17) SSR markers was carried out. This study make it possible to identify four (4) polymorphic microsatellite markers (VM30, VM33, VM68 and VM70), that is to say a rate of 23.52% of polymorphism versus 76.47% of monomorphism. Two of the polymorphic markers - VM68 and VM30 were submitted to the test of validation. At the end of this test, VM68 was codominant, because it makes it possible to distinguish the heterozygous individuals (F1, BC1 F1) from the homozygous individuals (F2) while the marker VM30 was dominating. The marker VM68 was validated and proposed in selection assisted by the markers of cowpea for resistance to CABMV.

Key words: cowpea, Cowpea Aphid-borne Mosaic Virus ((CABMV), Microsatellites, Validation, Burkina Faso.