ABSTRACT

Passion fruit woodiness is an important potyviral disease affecting passion fruits in the world. The newly identified isolate was named CABMV virus isolate1, while the commonly known one was named virus isolate 2. Currently, information on CABMV isolate 1 is scarce relative to that of CABMV isolate 2, which has been studied widely. This study was carried out to determine whether virus isolate 1 is transmitted by seed and select aphid species. For seed transmission test, mature seeds were isolated from fruits harvested from infected passion fruits plants maintained in a greenhouse. Thereafter, the seeds were planted in a nursery bed which was screened against aphids. The resultant seedlings had no symptoms associated with virus isolate 1. Furthermore, using reverse transcription–polymerase chain reaction, seed transmission rate of 0% was observed, showing that this isolate 1 is not transmitted by seed. Aphid transmission test was carried out in passion fruit plants using aphids from farmers' fields in Njoro. Four aphid species which are *Acyrthosiphon pisum, Aphis fabae, Schizaphis graminum* and *Myzus persicae* were selected for the study. The aphids were allowed 30 minutes virus acquisition period on virus isolate 1 infected passion fruits plants. Thereafter, the aphids were left to feed on healthy test plant for inoculation to take place. Symptoms development on healthy plants signified successful transmission by the aphids. Aphid transmission test results indicated that *Myzus persicae, Acyrthosiphon pisum,* and *Aphis fabae* successfully transmitted the virus.

Keywords:

Passion fruit woodiness, Passiflora, Aphids, Seed Transmission, Acquisition