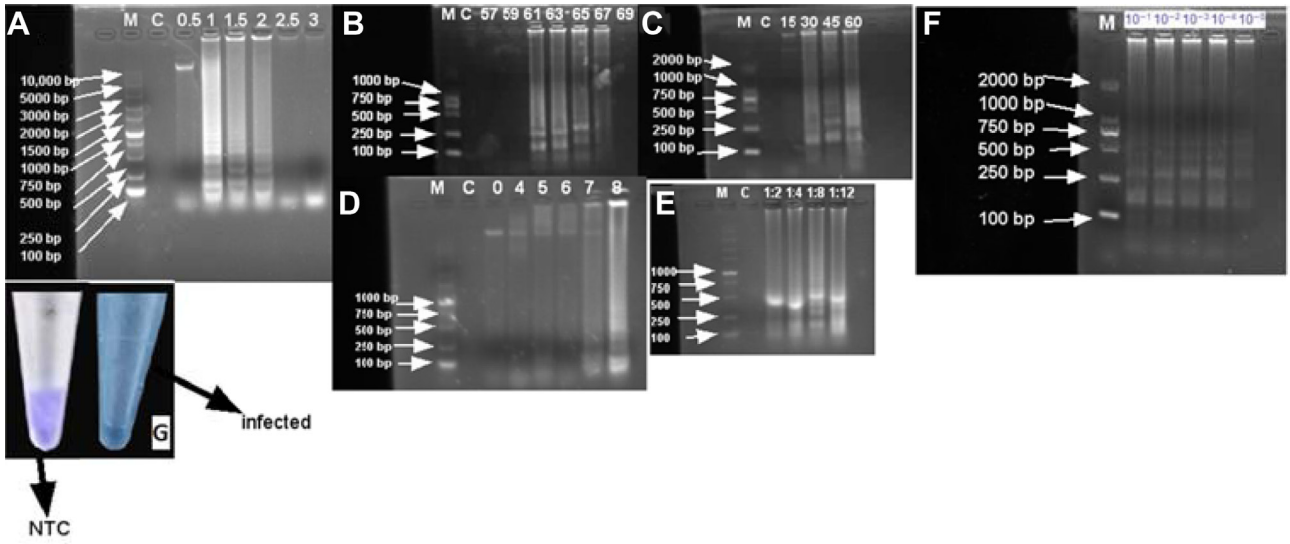

Supplementary Fig. 2. Optimization of loop-mediated isothermal amplification (LAMP) assay using specific target gene "recQ". (A) Optimization of LAMP reaction *Bst* DNA polymerase concentration for detection of *Xanthomonas euvesicatoria* on *Physalis pubescens*. Lane 1, M expressed DNA molecular weight marker ladder; lane 2, C negative control; lane 3, 0.5 U; lane 4, 1 U; lane 5, 1.5 U; lane 6, 2 U; lane 7, 2.5 U; lane 8, 3 U. (B) Optimization of LAMP reaction temperature for detection of *X. euvesicatoria*. Lane 1, M expressed DNA molecular weight marker ladder; lane 2, C negative control, lane 3, 57°C; lane 4, 59°C; lane 5, 61°C; lane 6, 63°C; lane 7, 65°C; lane 8, 67°C; lane 9, 69°C. (C) Optimization of LAMP reaction time for detection of *X. euvesicatoria*. Lane M, DNA molecular weight marker ladder; lane 2, C negative control; lane 3, 15 min; lane 4, 30 min; lane 5, 45 min; lane 6, 60 min. (D) Optimization of LAMP reaction Mg^{2+} concentrations for detection of *X. euvesicatoria*. Lane M, DNA molecular weight marker ladder; Lane 2, C negative control; lane 3, 0 mM; lane 4, 4 mM; lane 5, 5 mM; lane 6, 6 mM; lane 7, 7 mM; lane 8, 8 mM. (E) Optimization of LAMP reaction outer primer (F3/B3) and inner primer (FIP/BIP) concentration ratio for detection of *X. euvesicatoria*. Lane M, DNA molecular weight marker ladder; lane 2, C negative control; lane 3, 1:2 μM; lane 4, 1:4 μM; lane 5, 1:8 μM; lane 6, 1:12 μM. (F) Sensitivity of DNA concentration for detection of *X. euvesicatoria.* Lane M, DNA molecular weight marker ladder; lanes 2-5 indicated 1×10^{-1} ng/μl to 1×10^{-5} ng/μl concentration, respectively. (G) Colorimeter analysis through HNB dye of infected and non-template control samples after LAMP assay.