

Table S2 PCR conditions in this study

	Temperature	Time	
Genotyping of <i>Ty-1</i> / <i>Ty-3</i> / <i>Ty-3a</i> , <i>Ty-6</i> , and PepYLCIV and PepYLCAV viral DNA detection			
EmeraldAmp PCR Master Mix (Takara bio, Japan)	94 °C	2 min	35 cycles
	94 °C	30 sec	
	55, 60, or 58 °C	30 sec	
	72 °C	1 min	
	72 °C	3 min	
Genotyping of <i>Ty-2</i> / <i>ty-2</i>			
Blend Taq Plus (Toyobo, Japan)	94 °C	2 min	30 cycles
	94 °C	30 sec	
	68 or 55 °C	30 sec	
	72 °C	4 min	
	72 °C	10 min	
Quantification of begomovirus DNA by qPCR			
SsoAdvanced Universal SYBR Green Supermix (Bio-Rad, USA)	95 °C	2 min	40 cycles
	95 °C	5 sec	
	58 °C	10 sec	
	65 °C → 95 °C	(increment of 0.5 °C)	