

Supplementary Table 1: Serological and molecular characterization of PVY isolates in 2016 and 2017 field trials.

Trial	Isolate		Serotype	Recombination junction**		PVY strain group assignment	GenBank accession number		
	Plot	Plant Id*		HC-Pro/P3	CP		nt 1672-2666 (HC-Pro)	nt 8572-9373 (CP)	
2016	A	10 ₋₁	N ^a	2414-18	9163-82	NTN	MN414481	MN414539	
		10 ₋₃	O ^b	2392-93	~	N-Wi	MN414499	MN414540	
		43 ₋₁	O	~	~	O	MN414500	MN414541	
		43 ₋₂	N	2414-18	9163-82	NTN	MN414482	MN414542	
	B	14 ₋₁₀	N	2414-18	9163-82	NTN	MN414483	MN414543	
		20 ₋₁	N	2414-18	9163-82		MN414484	MN414544	
	C	6 ₋₁	O	~	~	O	MN414501	MN414545	
		14 ₋₃	N	2414-18	9163-82	NTN	MN414486	MN414546	
		14 ₋₅	O	2392-93	~	N-Wi	MN414503	MN414547	
		14 ₋₆	U ^c	2392-93	~		MN414497	MN414548	
		19 ₋₂	N	2414-18	9163-82	NTN	MN414485	MN414549	
		19 ₋₉	U	2414-18	9163-82		MN414498	MN414550	
	D	1 ₋₇	N	2414-18	9163-82	NTN	MN414487	MN414551	
		3 ₋₁	O	~	~	O	MN414502	MN414552	
		5 ₋₁	N	2414-18	9163-82	NTN	MN414488	MN414553	
	E	2 ₋₃	O	2395-96	~	N-Wi	MN414504	MN414554	
		2 ₋₄	N	2414-18	9163-82	NTN	MN414489	MN414555	
		17 ₋₁	N	~	~	N	MN414490	MN414556	
		17 ₋₆	O	2392-93	~	N-Wi	MN414505	MN414557	
	F	1 ₋₁	O	2392-93	~	N-Wi	MN414506	MN414558	
		1 ₋₁₉	N	2414-18	9163-82	NTN	MN414491	MN414559	
		5 ₋₂	O	2392-93	~	N-Wi	MN414492	MN414561	
	G	2 ₋₇	N	2414-18	9163-82	NTN	MN414493	MN414560	
		10 ₋₂	N	2414-18	9163-82		MN414494	MN414562	
	H	7 ₋₅	N	2414-18	9163-82	NTN	MN414495	MN414563	
		10 ₋₁₀	N	2414-18	9163-82		MN414496	MN414564	
	2017	A	42 ₋₃	O	~	~	O	MZ673240	MZ673218
			45 ₋₁	O	~	~		MZ673241	MZ673219
			67 ₋₁₀	N	2414-18	9163-82		NTN	MZ673242
		B	9 ₋₁	N	2414-18	9163-82	NTN	MZ673243	MZ673221
14 ₋₄			O	~	~	O	MZ673244	MZ673222	
19 ₋₂			O	~	~		MZ673245	MZ673223	
C		2 ₋₁₅	O	~	~	O	MZ673246	MZ673224	
		4 ₋₄	N	2414-18	9163-82	NTN	MZ673247	MZ673225	
		13 ₋₆	N	2414-18	9163-82		MZ673248	MZ673226	
D		2 ₋₉	N	2414-18	9163-82	NTN	MZ673249	MZ673227	
		8 ₋₃	N	2414-18	9163-82		MZ673250	MZ673228	
E		2 ₋₇	O	~	~	O	MZ673251	MZ673229	
		7 ₋₄	N	2414-18	9163-82	NTN	MZ673252	MZ673231	
		17 ₋₈	O	2392-93	~	N-Wi	MZ673253	MZ673230	
		18 ₋₁₀	N	2414-18	9163-82	NTN	MZ673254	MZ673232	
F		1 ₋₃	N	2414-18	9163-82	NTN	MZ673255	MZ673233	
		11 ₋₅	O	~	~	O	MZ673256	MZ673234	
G		1 ₋₉	N	2414-18	9163-82	NTN	MZ673257	MZ673235	
		10 ₋₁	N	2414-18	9163-82		MZ673258	MZ673236	
H		4 ₋₂	O	~	~	O	MZ673261	MZ673239	
	12 ₋₄	N	2414-18	9163-82	NTN	MZ673260	MZ673238		
	20 ₋₁₀	N	2414-18	9163-82		MZ673259	MZ673237		

^{a, b}: PVY isolates detected with PVY^N and PVY^O monoclonal antibody, respectively (see Materials and Methods for information on antibodies used).

^c: PVY isolates detected with PVY polyclonal antibody but not with PVY^N or PVY^O monoclonal antibodies.

*: Identification of the tested sample: mother plant-_{daughter tuber}.

** : Numbers according to nucleotide sequence of PVY^N605 isolate (Jakab et al., 1997).

