



**Table 1.** *Verticillium* strains identified from *Brassica* crops and reference isolates used in this study.

Strain ID.	Host	Verticillium Species	Lineage	Strain origin
VL-H1 <sup>1,2,3</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H21 <sup>2,3</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H3 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H4 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H5 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H6 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H7 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H8 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H9 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H10 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H11 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H12 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H13 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H14 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H15 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H16 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H17 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H18 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H19 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H20 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H21 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H22 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H23 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H24 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H25 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H26 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H27 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H28 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-H29 <sup>2</sup>	Canola	<i>V. longisporum</i>	A1/D1	Canola field, Portage La Prairie, Manitoba
VL-R <sup>2,3</sup>	Radish	<i>V. longisporum</i>	A1/D1	Radish field, Portage La Prairie, Manitoba
Vd-M <sup>2,3</sup>	Mustard	<i>V. dahliae</i>	-	Mustard field, Portage La Prairie, Manitoba
PD638 (0120) <sup>3,4</sup>	Oilseed rape	<i>V. longisporum</i>	A1/D1	University of Gottingen, Tiedemann Lab
PD629 (1196) <sup>3,4</sup>	Horseradish	<i>V. longisporum</i>	A1/D2	UC, Davis, Subbarao Lab
PD687 (1197) <sup>3,4</sup>	Horseradish	<i>V. longisporum</i>	A1/D3	UC, Davis, Subbarao Lab
Vd-Potato (Vd1396-9) <sup>3,4</sup>	Potato	<i>V. dahliae</i>	-	University of Manitoba, Daayf Lab

<sup>1</sup> VL-H1 was used for morphological identification.

<sup>2</sup> Verticillium isolates were used for multiplex PCR identification and finally categorized as *V. longisporum* A1/D1 (data not shown). As well, these isolate were included in pathogenicity test.

<sup>3</sup> Verticillium isolates were used for different PCR assays validation and PCR-RFLP characterization.

<sup>4</sup> Verticillium isolates were used as reference isolates of *V. dahliae* and different lineages of *V. longisporum*.